

Give industry students 'best grants'

by Sue Reid

Students reading subjects related to manufacturing should be awarded significantly larger grants and good industrial bursaries without a means test, a new paper on the mismanagement of production in the United Kingdom has claimed.

Its release coincides with two key articles in *Production Engineer*, the journal of the Institute of Production Engineers, which make a strong case for the establishment of centres of technological excellence in higher education, five-year business administration degrees and mandatory grants for science A level and Ordinary National Diploma course students.

The controversial paper on mismanagement, published this week by the production management action group, makes an urgent call for fundamental changes in the education system to encourage more students to go into manufacturing industry. The group, made up of senior academics at business schools, universities and polytechnics, says that the present economic climate

positively discourages school leavers from entering the field.

Serious consideration also had to be given to offering preferential postgraduate studentships and grants for well-qualified and motivated students to help them pursue specialist production management training.

There was a call for more production management courses at polytechnics to up grade the present broad spectrum of courses offered at present. Universities and polytechnics needed to ensure that production management was a substantial ingredient in postgraduate and post-experience management courses.

The paper concludes that links between the academic world and industry need to be improved and exploited to benefit all parties, including students. It says the major weakness of the British economy lies squarely in the field of production and that today's school leavers display a general aversion to manufacturing.

The articles in *Production Engineer* also underline the reluctance of young people to enter industry. They call for the establishment of new centres of technological excellence, comparable to the technical universities of Germany.

Written by Mr Clive Bone, a production engineer and member of the Institute, the articles name Imperial College, London, Brunel and Loughborough universities, and the University of Manchester Institute of Science and Technology as potential new centres.

The two articles—the first was published in June and the second will appear later this month—state the case for mandatory undergraduate grants for science A-level and OND students, special salary weightings for science teachers and the wider use of "link courses" to introduce school leavers into further education.

The Mismanagement of Production in the UK, a discussion and action paper by the Production Management Action Group is available from Professor Ray Wild, the Administrative Staff College, Greenlands, Henley-on-Thames, Oxfordshire.

V-Cs to back abolition of O levels

by David Walker

University vice-chancellors will today probably support the abolition of O-level examinations as proposed by the Schools Council, the body which advises the Government on curriculum.

At its meeting in London the Committee of Vice-Chancellors and Principals will discuss the council's suggestion that Mr Mulley, Secretary of State for Education, approve its plan to merge the General Certificate of Education and Certificate of Secondary Education into a new common system. They are widely expected to give the proposals their qualified support.

The Association of University Teachers' Schools Council representative, Professor Bill Wallace of the New University of Ulster, agreed. Only the university schools examination boards, led by the Cambridge University Local Examinations Syndicate, still hope the Department of Education and Science will reject the Schools Council's scheme.

Dr Frank Wild, general secretary of the syndicate, said: "I hope the DES can untangle this. The Schools Council has not spelled out who will have authority in the running of examinations. We have been asking the council detailed questions about how its scheme will work since 1973, but we have never had an answer."

Professor Wallace promised that although the decision on O level had been rushed there would be plenty of time for full consultation on changes in A level. The Schools Council has proposed a two-tier system of examinations, 18-plus, called N and V levels (Normal and Vocational). Its steering committee is investigating the proposals, comprising representatives of the CVC, the AUT and other educational interests and will report in September next year. The council will decide on the future of A level in 1979.

Part-time fees may rise £30

Part-time postgraduates who are themselves may face fees of nearly £300 a year if unions and colleges raise them in proportion to proposed new full-time fees.

As a result, hundreds of such as in-service teachers may be at risk because students unable to meet the higher fee.

Part-time fees are being worked out on the basis of a full-time fee of £122 a year. This will be £132 a year for students, part-time fees will pay £91 a year. From 1979, the full-time postgraduate fee of £750 a year could be faced by £375 a year.

In a statement this week Charles Carter, vice-chancellor of Lancaster University, said that his university would not exchange rate changes to have to meet both the new high British rate of £132 a year and the £91 a year for students. He said that many students meet their need, often by great effort, by burdening themselves with debt.

He urged the Government to provide funds for a fee of £2 to each candidate who applies through its office for admission to a university undergraduate course. The fee will be payable by candidates applying in Autumn 1977 for entry in October 1978, but not this autumn for 1977 entry.

The decision to introduce the fee was taken because of the increased cost to the universities of providing support for the UCCA scheme at a time of financial hardship. The cost of the scheme is estimated at £1m, nearly all of which is paid by the universities. The £2 fee should bring in roughly a quarter of that, and universities will continue to provide the rest.

There is no intention of shifting the major part of the responsibility for financing higher education to the applicants, the council said.

The decision was taken after full consultation with the universities. It is understood that the proportion in favour of those against was roughly three to two.

Some 140,000 candidates currently use the UCCA scheme. The council said that while it was reluctant to take any stand which would make it more difficult for candidates of limited means to apply it was satisfied that facilities existed to deal with cases of personal hardship.

A spokesman said that although the formal hardship scheme existed, suggestions had been made that schools or local authorities might be able to help.

The services UCCA provides include handling of each application, which up to five universities may be entered, distribution of copies of the application to the universities of the candidate's choice, and informing candidates of a university's decision.

OU in £250,000 US drama deal
The Open University, which recently opened a bureau in Washington, has been given £250,000 by Miami Dade College for the production of an OU drama course.

In return the college will have exclusive marketing rights for the television series in the United States.

Miami will receive 15 hour-long programmes, each featuring different plays. The full course is expected to be ready by autumn, 1977. Details, page 10

When is a joke not a joke? When it's academic



by Stephen Pile

Have you heard the one about 200 academics who met in Cardiff to define humour? It is terribly good, but rather long (three days in all) and does not have a punchline.

You see, these psychologists, anthropologists and others gathered at an international conference on humour and laughter, organized by the Welsh branch of the British Psychological Society, confident they could nail the age-old mystery with a scientific approach.

For three days lecturers often crew-cut and truck-suited, rattled through 85 papers in which the English language was by and large abandoned for a patois of psychological porridge generally flavoured with an American accent.

Delegates heard how giggling helps Bronx schoolgirls; how an *outré* have no sense of humour whatever, but a gift for faux pas that approaches genius; and how Hamlet, given a sense of self-mockery, could have spared himself and us five acts of unrelieved misery.

They were told how ethnic humour was a function of social normative incongruity and how phylogenetic and ontogenetic considerations could explain why everything is such a scream. Three men analysed

golfball punch movements in laughter, making it sound more like a lecture, and one mirthless soul intimated that we should not laugh because it interrupts our breathing. All lectures felt duty bound to start off with a joke, as did David M. Brodzinsky of Rutgers University. "Call me a cab," he said sheepishly and the audience steered itself. "You're a cab," he added, and looked forlornly round the silent room. "Uh... that is funny because there is a linguistic comprehension ambiguity such that the surface structure leaves room for doubt that I might wish to be called a taxicab."

An African psychologist with "Liberate Zimbabwe" stamped across his kaffian spoke with such speed, fervour and disregard for syntax that it was difficult to tell quite why humour did not, in his view, transcend cultural boundaries. It appears that he had inflicted 10 sub-Saharan jokes on 40 Canadian old-age pensioners and drawn his own conclusions.

Meanwhile, Dr William Hodgkins, a consultant psychologist, spoke on vulgarly in humour. Delegates were treated to the sight of a prim-looking man peppering technical sentences with sudden, ripe and understated puns as if they were merely part of his shopping list.

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DES letters indicate further cuts likely

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Art teacher training places have been severely reduced. At Brighton Polytechnic and Manchester Polytechnic they have been halved from over 100 to 50 and from 100 to 50 respectively.

The department's letters have not, however, been consistent. In the case of maintained colleges in the Inner London Education Authority and the Church of England colleges (which were being sent out at the time of going to press), a global figure for the institution has been given, with the authority having the opportunity to choose the number for intake or, if it wishes, to close some institutions.

A total intake of 730 students can be shared between seven London colleges and polytechnics: Central, North London, South Bank, Thames Polytechnic and Shoreditch, Philipps Fawcett and Furzedown, and Avery Hill colleges. In other cases, even when a local authority

has been given individual intakes for colleges, it has the power to vary the intake within the number, including ceasing to maintain an institution.

The letters, signed by Mr Michael Herzog, of the DES, differ from previous letters in that only the numbers for each local authority are given instead of a national list. The Department this week refused to issue details from its national list on the grounds that the figures were provisional.

Questioned at the Council of Local Education Authorities conference in Manchester, Mr Mulley, Secretary of State for Education, said on Wednesday that he did not know whether the letter to local authorities contained any national information on the allocation of teacher training places.

A NATFHE spokesman said the association could see no rationale for cutting back some institutions

much more harshly than others and was alarmed that the figures have not been issued nationally. The NATFHE plans to seek an early meeting with the department to discuss the cuts. The association is convinced that they are below the 1981 figures.

Institution	Under-18s	Over-18s	Total
Polytechnics			
Brighton	110	90	200
Leeds	185	150	335
Manchester	145	115	260
NELP	60	50	110
Sunderland	105	85	190
Colleges of Higher Education			
Buckinghamshire	95	75	170
Cardiff	145	80	225
South Glamorgan	115	80	195
Worcester	120	95	215
Colleges of Education			
Cardiff	60	50	110
Milton Keynes	85	70	155
North Riding	75	60	135

State College of Victoria at Frankston

PRINCIPAL

The Council of the State College of Victoria at Frankston invites applications for the position of Principal, which will become vacant upon the retirement of the present Principal in March, 1977. The Council would expect that the successful applicant would take up the appointment as early as possible in 1977.

The College, a constituent college of the State College of Victoria, is situated on an attractive 11 hectares site overlooking Port Phillip Bay, forty kilometres south of Melbourne, Victoria. At present it provides professional pre-service training for approximately 1100 primary and early childhood teachers. In the near future it expects to introduce courses for a four-year Bachelor of Education degree and graduate studies for qualified teachers. The existing master campus provides for a full-time student population of 3000.

As it is the only tertiary institution in a rapidly developing area, the Australian Commission on Advanced Education has invited the College to take a much wider role in the provision of tertiary education for this community.

General Vacancies continued

LONDON

THE NATIONAL HOSPITALS COLLEGE OF LONDON
Applications are invited from qualified persons for the post of Lecturer in Linguistics. The successful candidate will be responsible for the teaching of English to students of medicine and dentistry. The post is full-time and involves a salary of £12,000 per annum. Applications should be sent to the Director of the College, 11, Bedford Square, London, WC1R 4EJ. Closing date: 30th July, 1976.

Universities continued

BRISTOL

THE UNIVERSITY
Applications are invited from qualified persons for the post of Lecturer in English. The successful candidate will be responsible for the teaching of English to students of medicine and dentistry. The post is full-time and involves a salary of £12,000 per annum. Applications should be sent to the Director of the College, 11, Bedford Square, London, WC1R 4EJ. Closing date: 30th July, 1976.

WALSLEY

THE UNIVERSITY
Applications are invited from qualified persons for the post of Lecturer in English. The successful candidate will be responsible for the teaching of English to students of medicine and dentistry. The post is full-time and involves a salary of £12,000 per annum. Applications should be sent to the Director of the College, 11, Bedford Square, London, WC1R 4EJ. Closing date: 30th July, 1976.

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Still no place like home university for Scots

by Frances Gibb

Fewer Scottish students go to their local university now than 20 years ago, according to Mr Douglas Hutchison, of the faculty of social sciences at Kent University.

Writing on "Regionalism in Scottish Universities" in the May issue of *Scottish Educational Studies*, Mr Hutchison says that while in 1952 nearly 83 per cent of those going to university from Scottish schools went to their local institutions, the proportion had dropped to 71.4 per cent in 1972.

The trend, he concludes, is away from regionalism in Scotland, although the figure of roughly three quarters of pupils attending their local university is still high.

Despite the introduction of Universities Central Council on Admissions forms, which request candidates to specify up to five universities, it seems that the majority of students consider their local institutions.

"It seems clear that this is one

way in which English university norms are making little headway in Scotland", Mr Hutchison says.

Over two-fifths of Scottish students live at home compared with slightly over one-tenth of English. At one Scottish university, over 65 per cent of all full-time students live at home.

The main reason for this is historical, Mr Hutchison says. The four ancient Scottish universities, which predate all but two English universities by at least 300 years, grew up with and near main population centres. They were more open institutions than the two oldest English universities, and in the 1850s about one-fifth of their students were working class.

Conditions attached to student grants are another reason. When introduced they contained a powerful sanction to encourage local attendance. If a student chose to go elsewhere than his local university he was only given a grant equal to what he would receive at his local institution. This ruling was only relaxed in the 1950s and by then a considerable tradition of localism had developed, Mr Hutchison says.

Anglo-French link agreed

The Law Society and the Bar Council have approved a degree course in English and French law starting at London University in 1977. Those who pass will be able to practise law in both countries.

French and British students will read law at the Centre of European Law at King's College, London, for two years alongside students studying for an honours LLB. They will then transfer to the faculty of law in the University of Paris (1), previously the Sorbonne, for a further two years.

Graduates of the new course will receive an honours LLB degree and a similar ranking qualification from the University of Paris. The degree will qualify graduates to take the Law Society and Bar Council professional examinations and those set by the Paris Bar for aspiring advocates.

Professor A. G. Chloros, director

of the Centre of European Law, said this week that the course had been extensively discussed with the Bar Council and the Law Society. They had been very interested in the project and the Paris Bar had also been enthusiastic.

About 15 students would be admitted to the first phase in London next autumn. They would have to be fluent in both French and English.

Negotiations between London University and the University of Paris had been going on for more than two years. Both universities were enthusiastic about the new "double" degree. The London University senate and academic council had given their approval to the course and its launching date.

Professor Chloros explained: "When the students are in London they will be treated as ordinary English students and when they study in Paris they will be alongside French students."

Tories urge teaching watchdog

by Sue Reid

The creation of a council to monitor teaching standards has been urged in a key document published this week by the Conservative Row Group. It follows a Tory call for a similar body to represent the teaching profession.

The Shadow Cabinet's policy sub-committee last month decided to support the concept of a general teachers' council. The document is not dominated by the National Union of Teachers. The Bow Group publication argues for a body to control entry standards to teacher training courses and to exercise responsibility for professional discipline. It says the Conservative government should announce its intentions to establish a teaching council for England and Wales.

The new Bow Group document *Can You Read This?* underlines state education's quality of teachers, testing, literacy and selection process at 16. It calls for better teachers Mr Colin Boswell, a senior lecturer at Goldsmiths' Col-

lege, London, says the creation of a council would solve the problems of the teaching profession overnight. The council should have a significant number of lay members to represent the interests of the public and should be financed mainly through the registration fees of teachers. Besides controlling entry standards and approving training courses it should keep a special register to match teachers to the age range or subject speciality for which they trained.

If a teacher was appointed to a post for which he was not registered then the contract should only be for a limited period unless he gained the relevant qualifications through in-service training, says the article. The Secretary of State should have the reserve power to override the advice of the council or to permit "unregistered" teachers to work in state schools if the supply of staff fell below requirements. Mr Boswell maintains that the council's task of controlling entry standards would involve stating

minimum requirements for entry and assessing the quality of graduates and diploma holders.

The council, on the lines of the body proposed in the 1972 White Paper, would provide the framework for unifying all the teaching and education research bodies. They were bound to give a critical examination of the priorities in education. The examination would require claims to debate the fundamental educational policy, not just a brand outline of a plan.

Can You Read This? by Mr Boswell, Mr Colin Boswell and Stephen Evans, Bow Group, 110, High Holborn, London WC1, 40p.

Scheme to end 'academic laird' accepted

The proposals for departmental reform at St Andrews University, aimed at ending the "old academic overlords" of the Scottish professoriate, have been accepted by all but a few academics.

The mood is one of willing acceptance. Dr J. C. Amsin, a lecturer in the mathematics department, and chairman of the non-professorial staff association, said at the time of the reform discussions:

"Most people feel satisfied that a major principle has been established and are willing to settle for a workable compromise. There has been a minority, however, who had been among those most vigorous in pressing for reform who did not feel the proposals went far enough, he added.

Mr Tony Upton, president of the Association of University Teachers, said the proposals had been accepted by all but some 10 per cent as the best that could be obtained.

The proposals, recently agreed by the university council (the equivalent to the court), in take effect from October 1977, herald the demise of the professor's role as head of department.

"The chairmanship will no longer be determined by the length of a professor's contract or the size of which he retires", Dr Amsin explained. Instead there will be departmental chairmen, appointed by the university council for five years in the first instance, seven years if professors.

Each department will have a staff/student consultative committee with an agenda and minutes. Meetings at least once a term. Each will also have a staff to the university general council if a chairman opposes views.

The dissenters' case was outlined by Mr Upton, who said the proposals fell short of what had originally been demanded in the memorandum by the AUT and the non-professorial staff association to collective responsibility for all full-time teaching staff to be running the departments.

"But responsibility will remain with the appointed head of department and this is basically a negation of what we stand for, although we have an element of consultation possible formalising a situation that already existed", he said.

"Another sticking point is the difference between professors and non-professors and appointment period. The AUT had wanted parity. Dr Amsin pointed out that it was agreed by the new council consistently flouting his council's views, or whether one important issue would suffice.

In general, however, the proposals represented a significant change, particularly at St Andrews, the oldest Scottish university. It had brought changes which were novel for Scotland and significant both for Scottish and some English universities.



A scene from Georg Kaiser's play *Gas*, performed at the 21st Student Drama Festival in April, which is to be presented at the Roundhouse, Chalk Farm, from August 3-7. Acted by the M.A. Law of Leeds University, the play won the first Buzz Goodbody Award for Phil Young.

Oxford arts intake grows

Arts students at Oxford University are increasingly forming a larger proportion of the total student population, according to figures for 1975-76 in the Oxford University Gazette.

Of 11,547 students in residence, both postgraduate and undergraduate, 7,470 were reading arts and science compared with 7,345 and 4,063 respectively the year before.

Of the university's total 13,037 students in 1975-76, there were nearly twice as many arts students as science students: 6,650 and 4,387 respectively.

The disproportion is reflected in 5,534 men compared with 1,936 women (in residence) reading arts and 3,324 men compared with 753 women reading science. Of the 1,437 overseas students in residence the

vast majority—1,089—read arts. The total number in residence in 1975/76 was 11,547 compared with 11,408 the year before. Some 1,876 in the Oxford University Gazette.

The biggest increases were in English, geography and history. Between 1974/75 and 1975/76, student reading English rose from 731 to 780, geography from 246 to 297, and history from 383 to 430.

Numbers were also up for modern history, philosophy, politics and economics. English and history were the most popular subjects, with 5,534 students in 1975/76, down from 483 to 470.

The most popular subjects were

Law dean appointed

Mr David Bentley, MA, Bachelor of Civil Law, a tutor in jurisprudence at Christ Church College, Oxford, has been appointed professor of law and founding dean of the new law school at the University of East Anglia. Mr Bentley was taught at the London School of Economics and Harford College, Oxford. The new school will admit its first students in October, 1977.

Physical perks

The Physical Education Association has launched an annual text book award of £100 to be offered to the author of the best aspect of a book covering any aspect of current physical education syllabus. The award will be sent to the association's headquarters at the House, 10 Nottingham Place, London, W1, before December 30 next year.



The planning processes of the Department of Education and Science needed a revolutionary overhaul to end the obsession with secrecy, Mr Alan Bell, the new Liberal spokesman for education, said this week. Mr Bell, who takes over from Mr Clement Freud (MP for Ely), was particularly critical of the Government's reorganisation of higher education in the public sector, including online teacher training at Alwrick College of Education in his constituency.

Mr Bell is a member of the Association of University Teachers and was a lecturer in politics at Newcastle before he was elected in a by-election in 1973. He is a supporter of a University Grants Committee type of institution for higher education and would like to see an end to the binary system.

News in brief

Teacher pensions will be increased

The Government is to increase the pensions of over 400,000 school, further education and university teachers in line with the rate of inflation over the past year.

Several weeks ago, teacher union officials reacted strongly to suggestions that the Government was considering tampering with the inflation-proofing of public service pensions by amending the 1971 Pensions (Increase) Act.

Pensions will now rise from the beginning of December by 13.8 per cent, representing a total cost in a full year of about £108m.

New Surrey chancellor

The Duke of Kent is to be the next chancellor of Surrey University. He will succeed the first chancellor Lord Roberts of Woldingham, who retires on January 15 next year.

Plowden steps down

Lord Plowden, chairman of Tube Investments Ltd, is stepping down from the chairmanship of the London Business School. He will be succeeded by Mr C. C. Pocock, chairman of Shell Transport and Trading Company. Lord Plowden will become the school's honorary president.

£50,000 nursery grant

The Department of Education and Science has given grants for research in nursery education totalling nearly £50,000. The work is to be carried out by teams from Leeds University and the University College of Swansea.

Edge becomes PPS

Mr Fowler, Minister of State for Education, has appointed Mr Geoffrey Edge, a West Midlands MP, as his parliamentary private secretary in succession to Mr Christopher Price, MP, who recently resigned.

Like Mr Fowler, Mr Edge is a former Open University academic. He also lectured in geography at Leicester University. Educated at the London School of Economics and Birmingham University, he is no stranger to the DES, having been PPS there twice before.

Dainton for LA president

Mr Frederick Dainton, chairman of the University Grants Committee, is to be president of the Library Association in 1977. He is the first non-librarian to be nominated for 16 years.

Mr Frederick was chairman of the National Libraries Committee whose report led to the British Library Act in 1972.

Service agreement near

The National Association of Teachers in Further and Higher Education is calling for agreements on conditions of service for all lecturers to be finalised with local authorities by the end of October. The union hopes that all new agreements will be implemented from January 1 next year.

Bristol art closure would deprive 'entire south west'

by David Hencke

One of the few joint university and polytechnic art courses has been threatened with closure by the Department of Education and Science as a result of the 50 per cent cut in art teacher training courses.

The course, run by Bristol University and Bristol Polytechnic, has been allocated a total of 15 places in the DES for 1977. Details of the other cuts, which range from 30 to over 60 per cent, are given in the table.

Mr John Lancaster, the tutor responsible for the course at Bristol University, said a delegation from the university and polytechnic met the DES official responsible for the cuts, Mr Michael Herzog, and asked him to reconsider.

Professor Eric Hoyle, of Bristol University School of Education, has also written to the DES to ask them

to consider keeping the course. Mr Lancaster explained that the DES letter said the course should be closed because the cuts would make it uneconomical to run. The polytechnic attracted 34 students this year and moves to cut the intake could have left it with fewer than 15. But Mr Herzog had not realized that the course attracted students from Bristol University, which meant that numbers were much higher.

"Closure would actually damage the postgraduate education course in the university", Mr Lancaster said. It would also leave the whole of the South West without a single postgraduate art teachers' course.

The course attracts many students. For every one accepted this year, three have been refused admission.

Dr Brian Allison, chairman of the Association of Centres of Art and Design Teacher Education, accused the DES of breaking "verbal assurances" that no art teacher training centre would be closed as the result of the 50 per cent reduction. The allocation of no places to Bristol is a gross "illogicality", he said.

"If the principle under which Bristol has not been allocated places (that it would have 15 or less students) were to be applied throughout the country, there would hardly be a single postgraduate Certificate in Education, art option in any institution."

'Incredible' reply on prisons

by Mark Vaughan

A Home Office statement that prisoners had no difficulty of access to literacy training and further education was severely criticized this week.

The National Association for the Care and Resettlement of Offenders said they found the Home Office's ignorance of the difficulties prisoners faced "quite incredible". The Home Office made the statement in response to a 10-point plan for penal reform which Nacro put to Mr Jenkins, the Home Secretary, a year ago.

Among their recommendations, which envisaged reducing the number of men going to prison by a fifth and the number of women by a third, Nacro said prisoners should have much easier access to local authority adult education, facilities and literacy training.

"Similarly, offenders must have access to industrial re-training units and other facilities to provide special job creation schemes at

times of high unemployment", said the plan.

The Government's response was given to Nacro last week. In it the Home Office said: "We had not heard of the difficulties about access to adult education facilities, literacy training or the other facilities that your programme mentions."

This week the association replied that the Nacro/Probation Service Literacy Scheme in Wiltshire for example had found "a large and hitherto unmet need for literacy training among offenders". Nacro's national advisory service on further education for offenders found they faced "many obstacles" in gaining access to further education.

"These may include a background of educational failure; consequent lack of qualifications needed to secure places on further and higher education courses; little realistic hope of obtaining a maintenance grant and a fear that at the end the desired job may not be obtainable anyway."—TES.

Top level pay rise

Further education lecturers earning more than £8,500 a year will receive an increment in September, the Department of Education and Science agreed this week. Under Stage One of the incomes policy they were not permitted to receive increments.

Fabian appointment

The Fabian Society has appointed a new general secretary, Miss Dianne Hayter, formerly assistant general secretary of the society and a graduate of Durham University. One of her first tasks will be managing the society's £200,000 appeal.

Dr Hampson warns fees may rise to £1,000

by Frances Gibb

Tuition fees for 1978-79 may well be raised by 50 per cent, to nearly £1,000 a year for undergraduates, according to Dr Keith Hampson, secretary of the Conservative Parliamentary education committee.

He said Mr Fowler, minister of state for higher education, had confirmed last week in reply to a question he tabled that the Government would be giving and find a further £14m from tuition fees on top of the £28m estimated to come from increases in 1977/78.

Fees for 1977/78 are to be £650 a year for full-time undergraduates and £750 for full-time postgraduates. A 50 per cent increase would bring undergraduate fees to nearly £1,000 and postgraduate fees to £1,125. Addressing a summer school at

Edinburgh University this week Dr Hampson urged Mr Mulley to stand up to his colleagues in the Cabinet over pressure for more education cuts and convince them that they would have to look elsewhere, such as at housing or prices, to save money.

In the past five years education had had the lowest rate of growth of any spending department apart from defence, he said. It was well under the rate of growth of total public spending.

In the last public expenditure cuts, education had taken the single biggest share, to the extent that by the 1980s all building programmes in every sector would have been halted. Housing was being allowed to grow by 1.7 per cent (in real terms) while education was being cut by 2.3 per cent.

Tenure for SSRC's own staff

by David Walker

The Social Science Research Council this week reached agreement with the Association of University Teachers that its research workers should enjoy security of tenure like that of university academics.

The agreement will cover nearly 50 academic staff employed in the council's research units at Bristol, Oxford, Cambridge and Warwick. Directors of research units will no longer have the right to dismiss, and senior research staff will have job security as long as their unit continues. Junior staff will have contracts of up to five years and those being trained for research appointments will be guaranteed two or three years' employment.

This means that most research staff will have a minimum of five and a maximum of 10 years written into their contracts since no unit will be closed without at least five years' notice.

Dr Cyril Smith, secretary of the SSRC, said the agreement balanced the need of staff for security—an important factor in recruiting high quality people—and the need to judge the performance of a unit and increase staff productivity.

The agreement is part of a package of negotiations between the SSRC and the AUT. Following controversy about the closing of the main grant, however, will be on residential accommodation. More use will have to be made of private sector accommodation.

Among research projects financed from outside sources the university has selected a few which it feels it should support from general funds as permanent activities. They have been selected for their industrial, agricultural or medical significance and include pollution monitoring, radiation damage, gerontology, physiology, cell biology and liquid crystals.

Hull reveals five year growth plan

Medicine, nursing and the sciences are to be top priorities in Hull University's development in the next five years.

In expansion plans up till 1981, which have been submitted to the University Grants Committee, Hull says it has given great consideration to developments in national and regional requirements.

These include new courses in medicine (if its plans for a medical school are accepted by the University Grants Committee), nursing, management science, microbiology, applied science and technology. Developments in this field are seen as particularly relevant to the university's location as a major industrial and maritime city.

The target for full-time equivalent students is 5,770 by 1981, of which 75 per cent will be arts based and 25 per cent science based. The present position is that there are 4,192 full-time equivalent students of which 77 per cent are arts based and 23 per cent science based.

Hull also plans to expand its vocational postgraduate work and courses being considered include industrial relations, health administration, clinical psychology, plant pathology, industrial mineralogy and laser technology.

The expansion is planned to take place within Hull's existing buildings, although there will be provision on some teaching space. The main strain, however, will be on residential accommodation. More use will have to be made of private sector accommodation.

Among research projects financed from outside sources the university has selected a few which it feels it should support from general funds as permanent activities. They have been selected for their industrial, agricultural or medical significance and include pollution monitoring, radiation damage, gerontology, physiology, cell biology and liquid crystals.

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ATOL 152BC

Sir Alex damns poly 'pursuit of status'

by David Walker

Salary scales ought to be turned upside down if the polytechnics were to retain anything of their original ideals of service to the community, Sir Alex Smith, director of Manchester Polytechnic and former chairman of the Committee of Directors of Polytechnics, urged last week.

Present salary structures generated pressure, creating a drift towards full-time degree-type institutions, he said, citing a course taken by few people who left school with a diploma of mathematics. The intellectual effort involved in the design and running of this course is of a very high order. Yet in the Burnham system of salaries it is assessed at the lowest grade of work—an inspired effort, very much in accord with the polytechnic concept of education, positively discouraged by the salary structure.

Sir Alex told the Council of Local Education Authorities' annual meeting that his neglect of service in favour of status had marred the development of the polytechnics and partly explained the country's disastrous economic performance.

There was striking symmetry between graphs showing the fall in numbers of part-time students in higher education and in numbers on engineering and technology courses and those detailing Britain's export performance, unemployment and the falling value of the pound.

"The trends in our social and economic well-being and the trends in education are attributable in some measure to the same underlying cause, to the lack of esteem given to skills in doing, making, designing, developing, creating, and manufacturing, compared with the high esteem given to academic study and scholarship, to analysis and to research."

Change in binary balance urged

The meeting decided there should be more higher education students on the further education side of the binary line.

Sir Ashley Bramall, CLEA chairman, called on the Government to make clear the policy presuppositions in its various White Papers on student numbers that allocated students to the universities and to further education.

Representatives of both county and metropolitan authorities emphasized their desire to retain control of polytechnics and further education colleges although the scheme for pooling the cost of further education and the machinery for validating courses needed reform.

The council had been told by Professor J. D. Stewart, director of the Institute of Local Govern-

"For generations now, the prevailing influence in education has been the respect given to scholastic and academic abilities. There is nothing wrong with that. What is wrong is the associated value-judgment that those who do not make, who design and build, who market and manage, are not worthy of similar esteem."

Education had become synonymous with the predominance of scholastic attributes, and had relegated to an inferior role the rest of the wide spectrum of human talents and abilities that were there to be developed.

For Sir Alex, the numbers of young workers released from industry for part-time courses in further education was at the centre of this argument. The report of the Hensler-Houton Committee in 1964 which recommended a vast increase in numbers released had been ignored.

By contrast, the Robbins report laid the seeds of the "degree-giving society". Its premise was that a large stock of well educated people was unquestionably good for the country. But it was wrong if the process of educating them created a dislike of being involved in the processes by which a modern industrial and exporting country earned its living.

Given the choice between expanding full-time higher education and improving the provision for the day-release student, I know where my preference would have gone. He suggested some remedies. Part-time students ought to be encouraged and the salary system ought to reflect the value of those lower down the scale of further education, which had to rid itself of "that clammy feeling of second-classness". Local authorities ought to give credit to their local colleges instead of touching their forelocks to the university.

meat Studies at Birmingham University and a member of the Laydon Committee on Local Government Finance, that the end of local government control of education, in itself, was in sight. He described the possibility of local education authorities appointed by Whitehall on the same basis as regional health authorities.

Neither Mr Mulley, Secretary of State for Education, nor the leading figures in CLEA accepted this prediction. Mr Mulley urged local authorities to more action. He said there should be more discussion of educational values in their meetings. As long as rate support was in the form of a block grant, the education service could not be guaranteed a specific sum each year.



Lord Bowden, who retired in September as principal of the University of Manchester Institute of Science and Technology, receiving the traditional silver trowel after topping out a new complex of student flats. Built in a group of three four-storey units to house 240 students at a cost of £820,000, the new residences will bring UMIST's residential places to 1,327 in the 1977-78 session.

Cost of academic texts rises by 21 per cent

by Frances Gibb

The price of academic books rose last year by 21 per cent over the year before, according to the latest research by the Library Management Research Unit at Cambridge University.

The unit's latest report, published last month, shows that the average price of an academic book in 1975 was £5.56 compared with £4.58 in 1974.

The most expensive subjects were chemistry, where the average book cost £12.16, physics (£11.15), general biology (£9.45), prehistory and anthropology (£8.12), geology and meteorology (£8.07) and medicine (£6.07).

The largest price increases were on books on librarianship (90 per cent) printing and the book trade (£9 per cent) and English literature (44 per cent). Hardbacks were found to cost an average of £6.52, compared with £2.40 for paperbacks.

This work on book prices forms part of the unit's programme of research, funded by the British Library, into the organization and administration of British academic libraries. The investigation into book prices began in 1974.

The unit, which has been based at Loughborough University, where it will be within the department of Library and Information Studies. Mr J. L. Schofield, executive head of the Cambridge unit, has joined Loughborough as a senior research fellow and unit director.

Average price of British academic books 1975 by J. L. Schofield and Alan Cooper. Cambridge LMRU 1976 50p.

A workshop on trends in scholarly publishing took place at Loughborough University last week with the aid of a grant from the British Library research and development department. About 80 participants from publishing, library and research bodies discussed three studies of trends in scholarly publishing and the implications for libraries.

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The new building will consist of 200-seat lecture theatre, a 500-library, facilities for the departments of medicine, psychology, community medicine and preclinical medicine, and a forensic medicine and forensic science department, including a forensic museum.

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British team to help Pakistan OU

The Open University is sending a three-man team to help the development of the Open University in Pakistan.

The Ministry of Overseas Development has funded the visit under a technical cooperation scheme.

Professor Ralph Smith, OU acting vice-chancellor and vice-chancellor of the Open University in Pakistan, will spend a year in Pakistan working with other senior members, Mr John Registrar and deputy secretary, Mr Bill Prescott, senior lecturer in educational studies, will be in the country for nine months.

The team will help develop overall development plan, working with the university's staff, they will be building up links with Pakistan Broadcasting Corporation, Pakistan Television and the Pakistan Rural Development Programme.

Pakistan has a massive need for educational resources to meet its national needs. Between 70 per cent of the population is illiterate and the use of distance learning is seen as an economy-reaching the potential of the Open University.

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Don's diary

Professeur's week

Will the students be on strike again this week? That's the question that has begun each week since the end of the spring holidays at the end of February. Arriving at the beginning of February, I was soon made aware of the widespread hostility to the proposed governmental reforms in undergraduate education. The walls were plastered with notices of protest meetings, general assemblies, and so on.

Already then some universities were on strike, more or less. As it always has in Bordeaux, what was happening outside took some time to sink in. But when it did—that is, by early March—militant protests were clearly on the way. So I was not surprised when, a week before the holidays, I arrived to find the lecture room deserted except for a few alien American students. Visitors like me, and puzzled by it all. It was nice to speak to them in English, until the arrival of a solitary French strike-breaker: after which we relapsed into French in order to agree that it was not worth while to give a lecture.

Most of the staff were as opposed to the reforms as the students, though for different reasons. But they could not say the point of striking about it. Still, if a strike was what they wanted, then *moi* mine, professors could get on with their own work and add an extra week to the spring break.

The only ones to be inconvenienced would be the *turbo-profs* those who lived in Paris and commuted on the *turbatrain* to do their provincial teaching on the required day each week. They risked a pointless journey, but nobody else was really put out. They were all convinced that the students only wanted an extra week's holiday. It happened almost every spring since 1968, they said. They got restless, and they find something to strike about; it always just before the holidays.

But this time it was more serious. Some lectures did go ahead the week after that paralysis again. Nobody since then has been able to predict what will happen. It can change from hour to hour, they say with a shrug. We must go what happens in Paris, say the students, shrugging too.

The university president has circulated the staff advising them to be at their posts at the times appointed whatever happens. So I shall go in tomorrow, but with no idea what I'll find.

The Ministry of Overseas Development has agreed to support the team because of the potentiality on the country's rural development programme.

£2.4m Leeds med building started

Leeds University has begun its £2.4m clinical sciences building at St James' Hospital, which will complete will enable research activities within the hospital to be grouped together for the first time.

The new building, due for completion in December 1978, will provide teaching facilities for 200 students, about half the total of clinical students expected to be at Leeds University by 1980.

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weekly batch of letters from England do they allow me, suspiciously, to collect my mail.

Needless to say, when I arrive at the lecture room, there is nobody there. Even the Americans have given up. The doorway is barricaded by a pile of desks. As I turn away I meet a student spokesman who tells me I am lucky not to be picked up. There are even rumours of fighting between certain lecturers and pickets. But the important news, from my point of view, is that there will be nobody there for tomorrow's lecture at eight in the morning.

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Sociologist turns on his peers

Sociologists are hypocrites. The intellectual principles they profess and the way they run their profession and academic lives are completely separate things. They reject individualist and psychological theories, but when it comes to their own conferences and seminars, it is every man for himself. They pose as critics of society, but their own organization is complacent and self-perpetuating.

These blunt judgments are made in a paper that had a *succès de scandale* at the recent conference of the British Sociological Association. It has now appeared in pamphlet form, published by the body that groups together sociologists employed in polytechnics and further education colleges.

The author, Mr Michael Rustin of the North East London Polytechnic, delivers a polemic against the constitution and ethos of the BSA, and sharply criticizes his fellow sociologists in the universities. But he saves his venom for the breed as a whole.

Couching his attack in the language of the French existentialists, he says: "Sociologists must exist in a state of permanent bad faith. They are unable to act on the insights their discipline provides them with. They are all prisoners of organizations which their discipline allows them to see, but does not equip them to change."

Mr Rustin's paper, "Sociology as a Profession," available from the Organization of Sociologists in Polytechnics and Further Education, through Mr Gabriel Newfield at Hatfield Polytechnic, starts out as a statement of dissatisfaction with the way the BSA is run.

Too little is being done for sociology, outside the charmed circle of the universities, he says. There should be more public meetings, a greater degree of openness towards professionals working in government and those in social work, the last medicine with an interest in the subject.

For those teaching outside universities, the primary occupation is teaching, and while this may also be said of most university teachers, polytechnic and other teachers are often unable to sustain research as a major prestige-conferring activity alongside it.

Need for science of information

Society revolves around information. It is consumed for pleasure, and peddled for profit. Governments rely on it, and industry has made an industry of it. Journalists would be redundant without it. Information plays such a crucial role in our lives that the time has come, according to Ronald Stamper, senior lecturer in systems analysis at the London School of Economics, to establish a separate "science of information".

This proposal is contained in a paper he is to present at a symposium at Greening University on September 6 and 7 on "The application of information systems in the managerial and social sciences".

The essence of organization on a large scale is to work, not directly, with physical products and processes, but indirectly through words and numbers which represent them, in our economy.

"The physical tasks performed in the economy," Ronald Stamper says, "are understandable in the various engineering disciplines, but the messages transmitted and the better methods of performing them are not."

Why, then, do we ignore, relatively speaking, the other 40-50 per cent of the output of which are only messages? There is no science of information and what there are many capable craftsmen engineering knowledge for information systems.

He argues that "signs" are the key to a future science of information. A theory of signs, known as "semiotics" since the days of the Stoic philosophers, has been



Professors Macrae and Rex, two of the "great names" rarely seen at the BSA.

"To some extent the rethinking of sociology courses through the academic awards validation has produced some relative advances outside universities in design and methods, but this has not been adequately recognized in the formal professional structure."

Sociology teachers in polytechnic education and schools are uncertain about their right to the identity of sociologist.

"What might be regarded as a differentiation of function within a discipline taught and practised in many contexts is experienced instead as a unilinear stratification."

But within the BSA—the only national forum for sociologists—the "great names" of the profession are scarcely seen. The British sociologists who might be known to the layman—Professors Bottomore, Macrae or Rex for example—tend not to be among those attending the annual conference.

Mr Rustin says: "There appears to have been an unrecorded coup in the leadership of the BSA some years ago, leading to the withdrawal of some of the professional members, especially from the London School of Economics."

"The under-representation at the most recognized and senior academic figures is now marked, and it is unlikely in a number of years that it cannot be reduced to a negligible level. The professional association in its public dealings, and also in its support available for new work."

One has the impression now of an organization in the permanent

growing in the literature of many disciplines for a very long time. According to Dr Stamper it is time to bring these fragments together into a coherent body of knowledge so that the essentially practical systems design may be given a scientific basis.

Semiotics has four major branches: pragmatics, semantics, syntactics and epistemics. Two branches are being explored under the aegis of computer science: empirics and syntactics. The other two, which are more obviously scientific, tend to be glossed over by the technical information specialist. The result is often bad systems design.

Much of the relevant knowledge, asserts Ronald Stamper, is available in existing academic disciplines: psychology, anthropology, linguistics, and epistemology. Scientific method, measurement theory and theories of formal languages and automata, logic and programming theory, whilst applicable to based on utility with some aspects of experimental psychology.

While the idea of a separate information science is not new, proponents still find themselves out on an intellectual limb, though "it's a growing limb" he insists.

Jeremy Cliff

The LSE and the National Computer Centre are jointly sponsoring a series of books on Information Systems with an American partner, the first of five books, *Information Systems: Design and Analysis*, is published on June 16. A further 11 titles are under discussion.

hands of a younger and relatively radical grouping, continually replenished by new members, who are in fact prisoners of their situation. There is not even the possibility of fruitful conflict over the direction of the discipline, since all but a well intentioned middle group have left the field.

Both academic intellectual tendencies and old-guard professors are conspicuous by their absence. It is not a recipe for intellectual excitement."

Mr Rustin has some kind words for those "sectarian" tendencies. Followers of "ethnomethodology" and "structuralist Marxism", for example, have become sects, but this prevents individual researchers and teachers of these persuasions feeling isolated.

While sects could nurture an individual in the university mainstream he is left to sink or swim. The discipline of sociology takes upon itself the task of sorting out good work from bad, but it does not help to generate the work that has to be sorted out. Too little attention is paid to the conditions within which researchers can best work.

Universities were based on selection and strict principles of classification—success on individual competition. But success was only given to those who spent long periods in academic apprenticeship. Mr Rustin asserts there is a contradiction between a self-consciously critical discipline such as sociology and these principles of hierarchy.

He is saying that his fellows have made a Faustian contract with the system. They have bought academic freedom and a decent working environment along with their shares in the higher education industry. But at what cost?

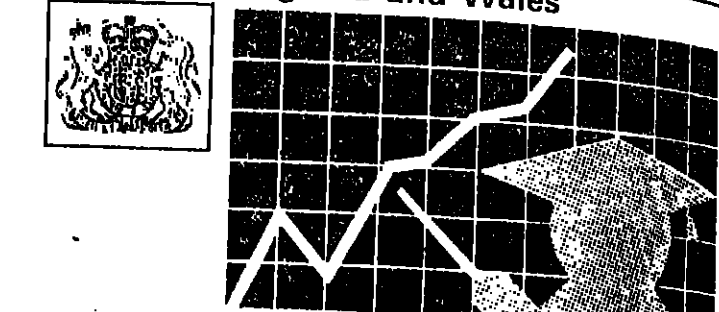
"At cost to the emancipating and democratic potential of sociology."

"A discipline committed to collectivism in its theory and methods itself functions in individualist terms. Exposing inequality is one of its dominant moral commitments, yet the discipline is itself hierarchical."

"A demystifying discipline. It takes for granted its own practices and fails to reflect on them in a sociological way. Its professional body is a conservative organization run by radicals."

Sociology as a Profession by Michael Rustin, 50p from G. Newfield, School of Social Sciences, Hatfield Polytechnic, PO Box 109, Hatfield, Herts.

Department of Education and Science BASIC SCHOOL LEAVERS STATISTICS JULY 1976



SCHOOL LEAVERS AND THE CSE AND GCE EXAMINATIONS (thousands)

	1972	1973	1974
A. TOTAL NUMBER LEAVING SCHOOL (1)	644.7	416.4	681.5
of which			
number leaving from maintained schools	218.1	90.4	160.1
grammar	91.0	80.8	70.5
comprehensive	252.7	180.1	280.2
other, including technical	40.8	23.8	27.1
total maintained	602.6	375.0	638.1
direct grant schools	15.5	15.5	16
independent schools	20.6	25.8	27.1
recognised as efficient			

DESTINATION OF LEAVERS	1972	1973	1974
degree courses	43.0	42.1	41
teacher training courses	20.6	18.5	18.2
other further education courses	76.2	70.4	74
all full-time further education	139.8	131.0	135
temporary employment (2)	4.6	4.6	37
employment	443.2	246.8	461
destination not known	57.0	35.2	76

EXAMINATIONS ATTEMPTED BY LEAVERS	1972	1973	1974
no CSE or GCE attempts	275.7	27.8	1395
CSE but not GCE	93.0	98.8	2102
GCE "O" level but not "A" level	157.2	170.9	2117
GCE "A" level	118.8	119.2	1214

QUALIFICATIONS OBTAINED	1972	1973	1974
4 or more "A" level passes	10.0	10.8	117
3 "A" level passes	42.0	41.8	422
2 "A" level passes	78.9	79.2	280
1 "A" level pass	22.0	22.9	214
total (3)	104.4	104.7	1053
no "A" level passes			
5 or more "O" level passes (4)	55.4	57.6	604
1-4 "O" level passes (4)	122.9	133.2	1084

GCE "A" LEVEL AT ESTABLISHMENTS OF FURTHER EDUCATION (5)	1972	1973	1974
not addition, to numbers (6) with			
1 pass	12.9	13.0	136
2 passes	6.7	6.6	66
3 or more passes	5.3	5.6	55
total output from schools and further education (7)			
number with			
3 or more "A" level passes	50.5	58.0	589
2 or more "A" level passes	93.4	94.5	957
1 or more "A" level passes	129.1	131.2	1317

percentage of age group with	1972	1973	1974
3 or more "A" level passes	8.7	8.7	8.7
2 "A" level passes	5.2	5.3	5.2
1 "A" level pass	5.3	5.5	5.3

B. ALL CANDIDATES FOR CSE AND GCE EXAMINATIONS	1972	1973	1974
number of candidates			
CSE	311.4	328.9	518.5
GCE "O" level (8) (9)	705.1	725.0	810.3
GCE "A" level (8) (9)	222.0	224.4	249.9
number of subject entries and passes			
CSE			
number of entries			
arts	518.0	538.3	846.1
science	584.9	622.0	901.1
social science	240.3	260.1	426.3
number obtaining grade 1	215.8	251.4	306.8

GCE "O" level	1972	1973	1974
number of entries			
arts	1,116.5	1,144.0	1,208.2
science	789.2	802.2	845.1
social science	399.2	405.7	426.1
number of passes	1,398.0	1,427.8	1,473.0

GCE "A" LEVEL	1972	1973	1974
number of entries			
arts	173.3	171.5	174.8
science	181.2	181.5	182.3
social science	112.6	116.4	120.7
number of passes	325.0	328.2	330.3

(1) The figures are derived from an annual 1 to 10 sample survey and relate to the calendar years 1971-72, 1972-73 and 1973-74. (2) Excluding independent schools and pupils not accepted as efficient and special schools. (3) Prior to many more further education. (4) Including Grade 1 CSE results. (5) Excluding university candidates. (6) School leavers and non-school leavers. (7) Including remaining numbers leaving from independent schools not accepted as efficient. (8) Sample examination only. (9) Including private schools, day and boarding schools.			
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How Leeds policing maintaineth standards

David Hencke reports on the maintenance of quality in Leeds University's validation of degrees at the College of Ripon and York St John

Universities have been criticized recently, more in private than in public for the speed with which they have granted a wide range of liberal arts degrees to a new generation of colleges of higher education, formed as a result of the rapid reorganization of former teacher training colleges.

Critics like Dr George Brown, director of North East London Polytechnic, and Dr Raymond Rickard, director of Middlesex Polytechnic, fear that academic standards are being lowered and that the proliferation of hundreds of new degree courses will eventually damage the standing of higher education.

They cite London University's validation of 236 degree programmes for about 20 colleges in one year and link suspiciously at the work of universities like Leeds and Leicester, Bradford and Sussex, which have paved the way for liberal arts developments in the colleges.

Nearly all the critics, however, are firmly committed to the Council for National Academic Awards, a body which, while rapidly validating many batches of education degrees, has shown until recently great reluctance to approve a single bachelor of arts degree for an independent college. Only proposals at Worcester, King Alfred's, Winchester, and the College of St Mark and St John, Plymouth which has an academic link with Plymouth Polytechnic, have been approved.

Opponents of university validation know very little about how the schemes work; just as supporters often have little idea of CNA procedures for validating new courses. The College of Ripon and York St John, formed last August from two Anglican institutions 24 miles apart, is one of the colleges which, after being offered a choice of validation, has opted for a university.

It originally sought a link with York University but after it became clear that this would not be possible approached the CNA. At this point the senate of the University of Leeds, which already validated its teacher training courses, decided to consider the validation of general arts courses. The college decided to remain with Leeds University.

Such a decision had profound consequences. Within a short period the college has been able to mount a modular combined studies programme leading to a BA or BSc. More than 50 students were recruited to the first year of the

college and the university's student



Main entrance to the college's York campus, and students whose liberal arts degree courses have a solid foundation.

course and a further 150 are expected to join them this September. The introduction of the new course has been particularly beneficial since it is allowing the college to attract new students at a time of rapid cuts in teacher training. The 1,000 student college is considered to have a good chance of becoming one of the most successful of the former Anglican teacher training institutions.

The consequences for Leeds University of the senate decision have been less profound. It has more than 9,000 undergraduates, and its validation work makes it responsible for a further 6,500 students.

This number is expected to fall as some colleges, like Hiley and Bingley, turn to other universities and others like Bradford decide to go to the CNA.

New machinery has been necessary to cope with planning the degree programme. The university has set up a Board for Collegiate Academic Awards with responsibility for validating all courses. It has similar status to a faculty board but it covers all disciplines except medicine.

Colleges which offer university courses are represented on it. It has seven standing committees and a larger number of subject panels and committees responsible for scrutinizing detailed proposals. Once courses have been approved a moderator is appointed by the university to observe developments at the college, including the monitoring of resources and the informal scrutinizing of students' work. Their first year work is marked internally by the colleges with external scrutiny by the university but the final papers will be examined by the university and external examiners.

Colleges are expected to strictly observe the university's student entry regulations. Although students are technically admitted under the local authority grant regulations for an honours course a decision on whether they will take an honours degree is normally made during the second and third years. The York degree course is similar to the BED programme—three years for an ordinary degree and four for honours.

Since Ripon and York mostly admit students with two A levels, while most entrants at the university have three, Leeds sees this as one guarantee that students it "rejects" cannot get on to an honours course through "the back door" by applying to Ripon and York.

Although the same entry regulations apply to college and university students, the college BA and BSc degrees are further distinguished by being classified college. The college explains this in a short-hand way of showing it is a college degree, rather than using BA (College of Ripon and York St John). The university says it is one way of distinguishing its own students from those of a college of the university, even though it says the academic standards for the degree are exactly the same.

The question of what exactly are "honours standards" and what exactly are comparable standards between degrees of different colleges and between university and college degrees appeared to be rather difficult to elucidate.

Professor C. S. Whewell, chairman of the Board for Collegiate Academic Awards, said that it would be almost impossible to decide whether, say, a Manchester University or a Leeds University degree were equivalent. It was even more difficult to decide whether a subject degree of Leeds University was com-

parable with a modular degree programme in a college validated by Leeds University.

Dr R. Wynne Owen, chairman of the biological sciences subject panel, also said that it was very difficult to define compatibility between the internal university and the external modular programmes. He tended to rely on book lists and on the knowledge of departments, taking into account the different facilities and resources available.

The college itself tried to distinguish between honours and non-honours work by classifying courses into A and B categories. Category A work tended to follow a more conventional pattern, and require a lesser grasp of difficult issues. Category B work required the study of original documents and source material and the course was often structured to encourage a greater amount of independent thought.

Even here, however, it was obvious that college departments had different standards and their relationship with their contemporaries in the university made an enormous difference.

The most striking difference at Ripon and York was between history and geography. It was clear that the history department had high academic standards, recruited well-qualified staff and enjoyed a mutually beneficial relationship with the university.

Professor David Dilks, an international historian with a reputation for stringency in awarding firsts, felt that the college historians often put too much into their courses for students to take. The students, although some of the findings themselves not too stretched, said that since the new combined studies programme had started, the quality of courses had improved.

The geography department however, appeared to have quarrelled with the university. Staff com-



Students whose liberal arts degree courses have a solid foundation.

plained about interference from the university in the course and a whole set of first year papers, normally marked internally by the college, had been remarked by university academics at the head of geography's request.

The general impression is that Leeds University appears to have been very careful in safeguarding academic standards of the new courses it is validating.

There was evidence however that in spite of Leeds following a relatively liberal policy towards the college, the old spirit of deference to the university academic still remained.

Although colleges have representation on the Board for Collegiate Academic Awards, college staff, however well-qualified, cannot participate on the subject panels which scrutinize courses. If the college had been validated by the CNA staff would automatically participate in its committees, giving them more experience. At Leeds, it seemed, even a college man with a double first, could not visit other colleges to look at their courses.

The question of the four year honours structure also seemed to be a university decision, which apart from having parity with a BEd structure, had no immediate academic justification. The fact that the CNA awards for Worcester and King Alfred's, Winchester, and the recent award by Sussex University for Brighton Polytechnic, are all three year honours would be a welcome change.

The quality of applicants for jobs at Ripon and York St John is rising due to competition caused by the economic situation.

Mr John Barnett said: "I now can almost say that unless a person has a first, a PhD, some university teaching experience and is under 30 he will not be appointed."

OU research group goads sensitive spot

Research at the Open University poses problems unknown in conventional universities and it solves them in its own ways. The Energy Research Group is one example of how to do research without students, laboratories or expensive equipment.

It specializes in energy accounting or energy analysis—basically the detailed computation of the amounts of energy consumed in any process, product or service. The results frequently make a nonsense of previous assumptions about the economics of a process.

Dr Ian Boucard, a member of the group, compared the use of glass and plastic in milk containers. He looked for a measure of the natural resources that had to be consumed in producing the two materials. The results were very different from those expected and the overall conclusion was that there was not much to choose between glass and plastic.

The leader of the group, Dr Peter Chapman, has already made his name as a serious critic of government attitudes to the development of nuclear power. His comments clearly have been irritating. In a recent issue of *Atom*, the bulletin of the United Kingdom Atomic Energy Authority, Mr L. G. Brookes of the economics and programmes branch took almost five pages to cast doubts on the group's arguments.

Basically Dr Chapman and his group claimed that although a nuclear power station will produce

in its lifetime much more energy than it consumes in its construction, where a rapid programme of nuclear power station construction is under way there will always be new plant under construction consuming more energy in materials and building processes than the completed stations are capable of providing.

Dr Chapman was concerned about the rate at which the nuclear programme went ahead; he concluded in an article in *New Scientist* magazine: "Our analysis has shown that present nuclear technology cannot substitute for oil on the timescales currently envisaged. This implies that the only way of coping with any future reduction in fossil fuels is to pursue policies which will reduce overall demand for energy."

Mr Brookes was nowhere near so pessimistic; directing his chief criticisms to environmentalists groups rather than the Open University team he questioned the assumptions on which the argument was based, concluding: "The authority and energy analysts who have looked at this problem see risk of any energy balance problems arising in the context of any conceivable growth rate of the nuclear system."

Dr Chapman returned to the attack a week ago in an article commenting on "Energy Research and Development" in the *United Kingdom*, a paper produced for Mr Barnett's National Energy Conference, by Dr Walter Marshall, chief scien-

tist at the Department of Energy. After working through the figures for possible trends in power plant construction Dr Chapman concluded that for nuclear power, "in addition to regurgitating a much larger power station construction industry, a speeded up planning procedure and the development of many sites simultaneously, such a programme could wreck the United Kingdom economy."

So the debate will go on; what is significant is the important part the Open University through the Energy Research Group is playing.

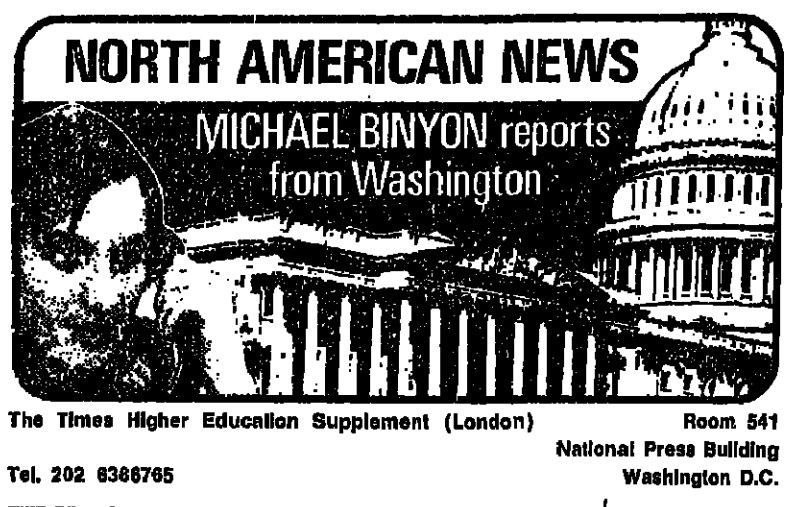
Dr Chapman says the group arose out of his research interests at Cambridge: "While a postgraduate student I became interested in the relationship between energy use and climate. I concluded that there could be a problem in the very long term future if we changed our climate by using fossil fuels at too rapid a rate. But when I went to the Open University I changed deliberately from concentration on research to concentration on teaching."

One of the courses we produced an introduction to materials—had the seeds of this research activity. One of the reasons why we think it appropriate for us to do this kind of research is because it has arisen out of the preparation of course materials.

"Rather than saying: 'You need to do research to teach well' we are saying: 'You need to teach in order to find the right research projects'."

Alan Cane

NORTH AMERICAN NEWS
MICHAEL BINYON reports
from Washington



The Times Higher Education Supplement (London) Room 541
 National Press Building
 Washington D.C.
 Tel. 202 6366765

Miami links in joint venture with OU

A large community college in Miami has contributed over \$250,000 to the production of an Open University drama course. In return, the college will have exclusive marketing rights on the television series in the United States, and will develop accompanying texts and material for use in colleges here.

Miami Dade College, with 55,000 students, is one of the largest community colleges in the country. It runs a "University Without Walls" (an extension course) for many adults and students, and has already made extensive use of the BBC series *The Ascent of Man* and *Classic Theatre* in the development of credit courses based on a television series.

Miami will receive 15 programmes, each almost an hour long, featuring different plays. The college was consulted on the final selection, and requested that black theatre should be included.

One problem arose with the play *Waiting for Godot* as Samuel Beckett will not allow it to be shown in the United States.

Six of the programmes have already been sent to Miami, and the college is now preparing its accompanying syllabus. It expects the full course to be ready by the autumn of 1977.

For its part, the Open University, which recently opened an office in Washington to market its products, is keen to encourage joint productions of this kind. It believes there is a ready market in the United States, particularly as the BBC now sells to America as much as the three commercial networks together sell to Britain.

The plays will be broadcast on the American Public Broadcasting System, the non-commercial network that grew out of educational television.

Aid boost for Indian graduates

The first fellowships for American Indians are now being offered by the Department of Health, Education and Welfare. A total of \$500,000 will be available for the current year, and will be used to cover tuition fees and living costs for about 50 fellows.

These are available to any Indian who is a full-time student in a graduate or professional programme provided this leads to a professional degree in engineering, law, medicine or forestry.

The grants come out of money provided by the Indian Education Act of 1972 and are being used this year to start new programmes, continue funding for others already initiated and broaden opportunities generally for Indian children.

Since the 1972 Act, \$85m have been awarded in 3,239 grants. Nevertheless, Indian education remains one of the most neglected and least successful of all special education programmes for minority groups.

At university level the drop-out rate among Indians is an astonishingly high 80 per cent. This has led to considerable controversy and argument in academic circles. The new fellowships are clearly a response by the very unfavourable publicity Washington has been getting over Indian education.

Experimental genetics projects

Cambridge City Council has voted to impose a three-month "good faith moratorium" on the plans by Harvard University to build a laboratory for genetic research (THES, July 2).

The Council also voted to set up a Cambridge Experimental Genetics Review Board to examine and monitor all major experimental research projects in the city.

The vote comes after several weeks' controversy over the possible dangers to the community from a research field in which the United States National Institute of Health has issued strict guidelines to avoid the dangers of disease and contamination.

\$1m grants to woo women scientists

The National Science Foundation has announced grants totalling almost a million dollars to colleges and universities to attract and keep more women in scientific careers.

Statistics show that only one scientist in five is a woman, although women make up 51 per cent of the population. The field is even more male-dominated in engineering, where only one in 100 is a woman.

To try to correct this the foundation has started a two-part project called Women in Science.

The first, supported by \$203,125 from the foundation, is called Science Career Workshops, and aims to encourage undergraduate and graduate women to consider careers in science. About 6,000 women will be able to attend one-day and two-day sessions at colleges and universities in 17 States.

The second, called the Science Career Facilitation Project and costing \$743,045, is directed towards women who have received Bachelor or Master of Science degrees in the last two to 15 years, and who are not currently working in the fields for which they were trained.

These women will be able to pursue independent study or take courses that will increase their knowledge to a level expected of current graduates at the same degree level. Two of these awards will be in engineering, two in chemistry, one in mathematics, one in computer science, and five in interdisciplinary fields including polymer science and energy-related physical sciences.

A total of about 350 women are expected to take part in these projects, with the largest number, 50, to be selected by the Polytechnic Institute of New York for a project in polymer science and engineering.

Alaska closure leads to recriminations all round

The only private university in Alaska closed its doors last week. After three years hovering on the brink of bankruptcy and two previous unsuccessful attempts to close, the Alaska Methodist University finally ran out of money.

The closure has stirred considerable controversy between the university and the State on the one hand and the university and the Methodist Church on the other.

Alaska is angry that the university turned down its offer to buy the university for \$15.5m and the powerful Board of Higher Education of the Church believes the trustees vacillated so long that they threw away all opportunities for a future role for the university.

The trustees still believe the university can reopen in eight months' time, and are pinning their hopes on a decision by the General Conference of the Methodist Church to set up a fund of \$500,000 a year for the support of three higher education institutions, of which the university would be one.

The Church's Board of Higher Education, however, is willing to give the money only if it feels there is still a distinct role for the university which is not duplicated by the aggressive and newer State-supported University of Alaska. It has sent a higher education consultant to Anchorage, where the university is situated, to investigate.

Meanwhile, the university has transferred its college of nursing—the only one in the State—to the Anchorage branch of the University of Alaska, and has told the 20 teachers in the other liberal arts departments that they are free to look for jobs elsewhere.

The university is a classic case of an institution created in a spirit of triumphalism in the boom years of the 1960s which has been unable to adapt itself to the peculiar needs of its surroundings and sudden alteration in circumstances.

It was the first university in



Alaska's oil pipeline: siphoning off potential students.

Bilingual studies get Washington aid

Students who are following bilingual education training programmes will now be entitled to Government grants of up to \$1,500.

They will also receive \$600 for each dependent, plus separate tuition and related costs based on the actual costs of the college or university. Postgraduates will also be eligible for these payments. Previously student grants were paid in a lump sum with no consideration of tuition costs.

The new grants are evidence of the importance now being attached to bilingual education. There are usually the language in question is a second official language in some States—though these are most unlikely to succeed.

Ford Foundation helps new plays

New American plays are encouraged by a three-year grant from the Ford Foundation to the cost of their production.

The first year will be given in the form of a non-profit making production.

The foundation will give grants up to \$7,500, or 5 per cent of their operating costs, whichever is less, to cover some of the production costs which have more than one professional production.

Dr Ella

Ella Fitzgerald, the singer, has made an honorary doctor of music letters by Dartmouth College.

Percentage of working class entrants rises sharply

from Peppy Barlow

DUBLIN

The proportion of university students who come from working-class backgrounds has increased substantially over the past decade, according to research carried out into the admission pattern for students entering University College, Dublin.

The research, undertaken by Miss Ann Burns, a member of the administrative staff of the college, indicates that over the last 10 years working-class representation has increased by about 6 per cent with a drop in the upper-middle-class plus group of about 4 per cent.

A group of expected farmers' children are well represented in agriculture and veterinary medicine, although some agricultural students have a managerial or professional background. In medicine the distribution is spread across the social scale with a peak in the higher professional group.

Dentistry has three dominant groups: higher professional, managerial and farmers, whereas engineering, science, arts and social sciences have a more even spread. Commerce peaks in the managerial and intermediate non-manual social group, while law draws more students from the higher professional and managerial sections.

Comparing the 1975-76 intake with that surveyed by Dr Monica Nevin in 1964-65, it emerges that the farmers' group has decreased in agriculture, whereas the skilled workers' participation in engineering has sharply increased. Some manual, skilled and semi-skilled workers have increased their showing in practically all the courses, and there has been an overall decrease in participation by the lower professional group, especially in arts, science, engineering and agriculture.

Comparing enrolment patterns with those in the United Kingdom, it emerges that participation by farmers' children is proportionately higher in the Republic. The lower middle class group in Britain is more heavily represented than in the UCD, whereas the reverse is true for the upper middle class.

In UCD 16.2 per cent of students come from the working class, against 45.2 per cent of the population as a whole. The comparable percentages in Britain are 23.2 per cent and 57.9 per cent.

Miss Burns, noting that the Government's higher education grants scheme was introduced in 1968, suggests that although this was no doubt responsible for the change in the pattern of admissions, the absence of any more dramatic change can be put down not to lack of funds but to lack of family motivation and aspiration in the lower social groupings.

Critics have not been slow to point out, however, that the level of student funding by the Government is still so low that most students need substantial "topping-up" finance from private sources and that the minimum level for the award of a grant is still in many cases above the minimum level for admission to university.

Peter Wilby reports on Australia's flying academics

'Universities without walls'

PERTH

The flying academic has arrived in the flying doctor Western Australia. An experimental open learning scheme—on the lines of the "University Without Walls" in the United States—is now being completed at the Western Australian Institute of Technology in Perth.

The scheme's director, Mr Michael Walker, with two colleagues, uses a light aircraft to visit half a dozen students and cover 600 miles a day.

At nearby Murdoch University the Royal Flying Doctor Service radio network has been used to broadcast five Sunday morning lectures on "The Changing World". A sixth Sunday was used for a network discussion involving all the course participants—living in such places as Garryn Junction, Brong Springs, Lander, Bryah and Mininer—and the course coordinator.

Both these experiments are attempts to solve the educational problems posed by Western Australia's unique geography. The State's land area is roughly equivalent to that of Western Europe, but while the latter has a population of 40m, Western Australia's is just 1m, three quarters of which are compressed into the metropolitan area around Perth in the south-west which contains virtually all the post-secondary educational resources.

The rest of the population is scattered thinly through the wheatlands and mining areas, yet until a few years ago external university and college education in Western Australia was much inferior to that offered in Queensland.

Both Murdoch and the Institute of Technology offer a wide range of their courses for external study and the student population stretches as far as the Christmas Islands in the Pacific and Papua New Guinea.

Murdoch has about 450 external students on degree courses. "We have put our resources into course design for independent study, mainly printed study guides and audio cassettes. Rather than the occasional attendance sessions," said Mr Patrick Gukun, Director of External Studies.

Murdoch and the Institute, however, jointly send out touring tutors



Flying doctors in the outbreak.

who are sometimes subject specialists and sometimes experts in study skills. Study requirements are planned to fit in with the demands of students' working lives. No work, for example, is expected from a farmer during the sheep shearing season.

The open learning scheme takes these developments a stage further. Instead of enrolling for a centrally planned course, students choose their own study topics. "Learning contracts" are entered into with the local community. They include school teachers, members of the Government Departments of Agriculture and Forestry, a priest and a retired geologist.

Mr Walker helps the students and the consultants to draw up "learning contracts". Both keep standardized logs recording hours of study, reading and general progress.

At the end of the contract the student's portfolio is assessed by a panel of experts who will also give an oral examination. Out of the 22 students involved, eight worked at sub-tertiary level and all but one of the remainder at undergraduate level.

The students have included a farmer's wife who wanted to learn about the wheat belt she lived in and an area representative for Shell Oil living at Ballard, 140 miles north of Perth, who preferred to undertake a business course while he was "on the job".

Now that the experiment is drawing to a close the Institute of Technology has decided that it does not have the resources to expand the scheme. Proposals for its continuation have been sent to State and Federal Government agencies and Mr Walker hopes, if all else fails, to raise funds from private industry.

In the second of two articles on West German research, Günther Kloss looks at university financing: Funds squeeze means cuts in several specialisms

Widespread university fears for the future of research were deepened this year by the uncertainty surrounding the exact amount of Government support which would be forthcoming. Most of the finance is channelled through the Deutsche Forschungsgemeinschaft (DFG), the central organization for the support of the arts and sciences in the Federal Republic and the most important advisory body for parliament and Government.

DFG has an annual budget of about Dm650m (£130m), contributed in roughly equal parts by Bonn and the Länder. It is a semi-autonomous organization, with institutional membership only, although sometimes individual researchers can also be helped. It also designates priority research areas where it feels efforts ought to be concentrated to bring German research up to international standards.

The general direction and underlying rationale of the association's support can be seen in its latest "grey plan" which sets out its plans and the proposed financing of the research projects. The grey plan draws attention to the shortcomings of West German research in the fields of sociology of medicine, clinical research, psychiatry, psychology, the history of science and technology. On the other hand, it says that research in chemistry, microbiology and solid-state electronics is now at international standard.

The association has suffered particularly badly recently not only because Government allocations have fallen short of its needs but also because various Federal and Länder governments have had different views on the financing of the so-called "special research areas".

These, which began to be established at universities some eight

Lebanon

Final decision point coming for American University

from John Munro

BEIRUT

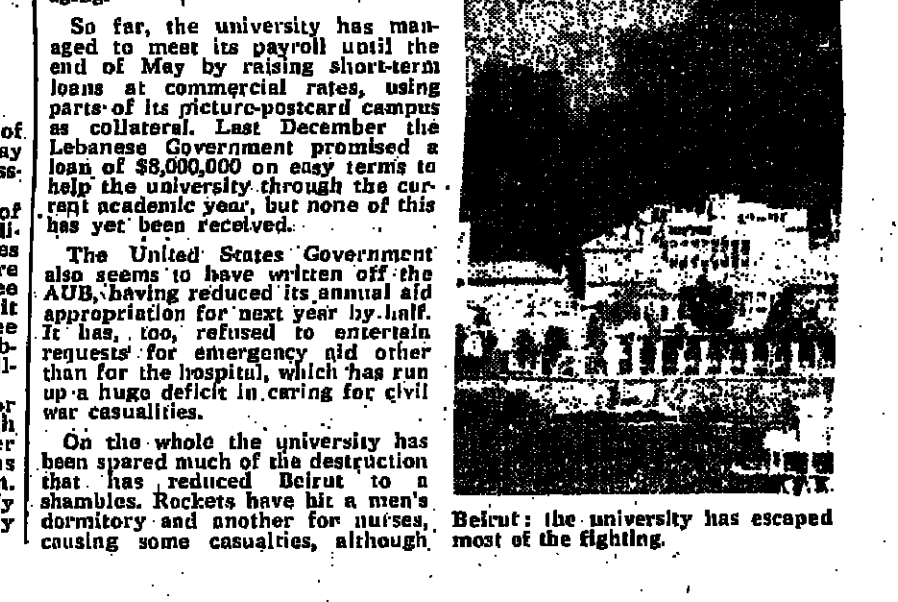
It is quite possible that the American University of Beirut died last month without anyone realizing it. So far, though, no one has signed the death certificate, and at their meeting in New York on June 26 the Board of Trustees agreed to defer any definitive statement on the university's future until the political situation in Lebanon had clarified. Meanwhile, the AUB is offering courses as part of a rescheduled semester for the 1,500 or so who have registered, regardless of the fact that the faculty is leaving the country in a steady trickle and that the administration is now reduced to a skeleton staff comprising mostly local personnel.

Clearly, the standard of education that is being offered falls short of a generally acceptable level, and increasing numbers of the faculty who have chosen to remain are accusing the Trustees of acting irresponsibly in not closing down the university, especially as the prospects for 1976-77 are hardly encouraging.

So far, the university has managed to meet its payroll until the end of May by raising short-term loans at commercial rates, using parts of its picture-postcard campus as collateral. Last December the Lebanese Government promised a loan of \$8,000,000 on easy terms to help the university through the current academic year, but none of this has yet been received.

The United States Government also seems to have written off the AUB, having reduced its annual aid appropriation for next year by half. It has too refused to entertain requests for emergency aid other than for the hospital, which has run up a huge deficit in caring for civil war casualties.

On the whole the university has been spared much of the destruction that has reduced Beirut to a shambles. Rockets have hit a men's dormitory and another for nurses, causing some casualties, although



Beirut: the university has escaped most of the fighting.

LETTERS TO THE EDITOR

Tuition fees

The art of feasible sacrifice

The cuts are coming—and soon. Last Wednesday Mr Hesley blurted out the Parliamentary Labour Party and the Trades Union Congress that cuts in public expenditure next year were essential if unemployment was to be brought down without stoking the fire of inflation once more. To bring the inevitability of further cuts closer to home, on the same day Mr Mulley in a speech at Manchester referred ominously to "the adoption of more realistic if less generous staffing standards in higher and further education".

The following day the Cabinet held a preliminary discussion about how any new cuts could be distributed between the various services. The scale of these cuts is now reasonably clear: they will amount to at least £1,000m—the figure mentioned by the Chancellor last week in the Budget—but in the light of opposition from Labour MPs and the TUC are unlikely to be as much as £2,000m which a few weeks ago was the best guess. Their timing is also fairly definite. An announcement will have to be made in the next month if any education are to be put into effect in 1977-78.

At first glance higher education is particularly vulnerable. The crisis of resources through which all publicly-supported services are passing has been compounded in the case of higher education by a crisis of public confidence. No large and vocal element in the population is going to take to the streets to protest against cuts in public spending on universities and colleges. Few local authorities today would give a higher priority to expanding and improving advanced further education than to preserving the service of the statutory education service in schools. If the pooling system encouraged them to choose.

The thinking within the Department of Education and Science is now more sophisticated than in the days when Mr Harewood was thought to have suggested that universities should sell their art treasures and that there is still a widespread feeling that no great damage will be done to mark time for while. Even among those who are public spending, leaving Labour MPs, higher education is regarded, after defence and roads, as one area in which cuts would be least unacceptable.

In fact higher education is much less vulnerable than it appears at this time. Expenditure on schools may receive much greater public support than on higher education, but this does not mean it

is less likely to be cut. On the contrary for a combination of technical and demographic factors it is rather more likely to be the target for Mr Hesley's axe.

First, higher education is difficult to cut in a crisis. Its capital programme has already been effectively wiped out and real cuts in recurrent expenditure (as opposed to reductions in projected growth) are not made easily in a hurry. Certainly there is higher education no easy saving to be made comparable to putting up the price of school meals. Secondly, the demographic facts cannot be ignored in any consideration of priorities. The school population is declining; the 16-plus age group is still increasing. Demand for higher education remains buoyant as the recent rise in applications to universities and polytechnics has shown.

Yet this is short-term comfort. A frightening gulf still exists between those economies which higher education institutions are prepared to contemplate and those which the Government, firmly set on a rightward course on public expenditure, considers the irreducible minimum sacrifice. The suggestion from the joint Universities and Polytechnics Grants Committee working party that fees for overseas students should be actually reduced has provoked a sour reaction in Government circles. It is already quoted as an example of how the universities in particular have abjectly failed to come to terms with economic reality.

On the other hand, the Government is in full retreat. Its social priorities have been abandoned and the "social wage" forgotten.

Both higher education and Government must abandon their trenches and turn the present no-man's land into common ground on the appropriate level of public support in a time of necessary public austerity. It is important that they should at least talk the same language. Universities and colleges can no longer expect to get away with rejecting all proposals for economy which interfere with their traditions or threaten their stability. The Government must acknowledge and defend its social priorities and in particular its obligation to maintain reasonable standards in education. No doubt 10 years ago the universities could afford to lose some fat. This is not so true today. If Mr Hesley is forced to take the knife to higher education once again, he should remember he is cutting dangerously close to the bone.

Crude cuts and complex needs

However unpalatable the reduction in teacher education places has been for colleges and polytechnics, it has become an inevitable necessity. The falling birth rate, which caused a reversal of a previous policy for expansion, has forced the Department of Education and Science officials with an unenviable task.

Their task is to reduce the number of teachers while at the same time to have chosen the "right" mix of courses of across-the-board cuts without regard to the sophisticated needs of research, planning, academic futures or the success or failure of individual institutions in attracting students.

To add insult to injury the department seems once again to have chosen covert "selective" planning exercises, using the summer vacation to impose unpalatable measures when most staff have already left their institutions for conferences or does the exercise appear to be that Mr Mulley, Secretary of State for Education and Science, has been reported as saying to a Council of Local Education Authorities' conference that he did not know the contents of his own officials' letters.

Some small colleges, like North Riding, Charlotte Mason and Milton Keynes, have made remarkable innovative contributions to teacher education, which have raised academic standards and attracted students. It is almost self-defeating to give these institutions a similar "take to others which are still limping along" with outdated, badly constructed certificate courses.

It is to be hoped that the 1977 figures are only temporary, giving the department a breathing space to present a workable and academically justified policy. If they are not, it is sad reflection on the calibre of the men and women who are in charge of teacher education at the moment.

from the master of Birkbeck College

Sir,—Your comments on the Government's decisions on university tuition fees, like those of many others, have been mostly right but with one important omission. May I put the record straight?

It is true that the majority of full-time home students taking courses for first degrees get mandatory awards from their local authorities so that they will be unaffected when tuition fees are raised to £650 a year. It is true that some of them—or their parents—will be better off, getting their fees entirely paid for them instead of only the first £50 as now. It is true that the majority of full-time home students on postgraduate courses are on studentship awards from the research councils and so on, so that increases in tuition fees to £750 will make no difference to them.

But there is one class of home students who will be badly hit in the future: the part-time students who want to put in a spell of full-time study just before a vital exam or, if they are postgraduate students, a critical point in their research.

They have to persuade their employers to allow them the time off with the choice of giving up their jobs if leave is refused. Unless they are very lucky with their employers and get leave with pay, they and their families will have to adjust to a reduced income for a period. But at least, up till now, the full-time fees they were obliged to pay have not been inhibiting. The Government's decision, however, will not only put the fees for such students beyond the means of the majority—for it will make £215 for first degree students (£250 for postgraduates)—but it will make the chances of their getting help much smaller. Allow me to illustrate.

A large number of part-time first degree students have in the past some help earlier in their careers as students in a college of education, for example, which disqualifies them from any mandatory award for full-time study. They are eligible

for discretionary awards but local authorities have differed greatly in their practice in the past; now, with each discretionary award costing more because of the fee increase and local authority expenditure squeezed, even fewer students will get help.

There are no state schemes for helping part-time postgraduates in any way and, I am sure, who have been deliberately silent about their discretionary powers to assist, will now be even less inclined to help.

Some private employers have been ready to help staff with fees at present levels out of their training funds, but they are unlikely to raise their contribution to match the new levels. The same will be true of public employers. The cost of teachers' study awards schemes will rise or, more likely, will be cut to cover fewer people. Private charities are equally likely to be deterred.

In this institution, as no doubt in many others, we have our own small number of scholarship and bursary awards which have included relief from fees. Each of these will now cost the college more, since we shall be credited for grant calculations, with the foregone income.

Thus will those home students with the strongest claim to our support—the part-timers who earn their relief from fees—be hit hardest. They will have to cover the cost of their already small opportunities for periods of full-time study which have hitherto been open to them? There is a way round. I will not elaborate on it here but the principle can be simply stated. Give students who have proved themselves by successful part-time study of a year or more a *mandatum* right to a spell of full-time study in proportion: say, one term full-time for every one year part-time. This, I think, would be a new and brave initiative be avoided but present injustices would be removed.

Yours faithfully,
R. C. TRINICK,
Birkbeck College,
London.

Library growth

from Dr D. J. Urquhart

Sir,—The problem of limiting in some way the size of university libraries has arisen in several countries. The basic cause is not economic recession but the growth in the volume of publications.

This growth has in the past ended concepts about comprehensiveness first in private libraries and then in libraries of learned societies. Now this growth is affecting university libraries. Soon it will make international co-operation between national libraries essential.

Rather than protesting against what in the long term is inevitable may I suggest that those who are disturbed by the self-renewing university library concept should consider whether there are adequate bibliographies in all subject fields, whether the bibliographies are available in universities and whether those who are interested in research know how to use them.

Yours faithfully,
D. J. URQUHART,
Birkbeck College,
Leeds.

Self-renewing libraries

from Mr John Cowley

Sir,—Mr Harris rightly makes the point that there may be some virtue in the concept of the self-renewing library (THE TIMES, July 16). Most polytechnic libraries must plan within the context of limited space and will be happy to build stocks of between 250,000-350,000, in the process accepting the necessity of regular and vigorous stock editing, which takes into account support from local, area and national cooperative schemes.

However, it is a nonsense for him to say that a book is a "one-off" item and should be replaced by a new one.

gratulatory way, that his kind of library best serves the needs of academic staff from his and other institutions of higher education in the area, and to make the assumption that the performance of a polytechnic library of modest size in academic terms in some way proves the case for the concept of the self-renewing library. Academic needs are infinitely varied and Mr Harris knows that advanced courses and research in a wide range of subjects require substantial library resources to support them.

As one who is faced with the problem of allocation of resources both in developing undergraduate courses and to specialist research areas, I see the main solution in the problem of over-expanding libraries and wasteful duplication of stocks as the rationalization of academic deployment in higher education.

Firm decisions could be taken about areas of specialization which in turn would provide the necessary guidelines for library purchasing policy. If polytechnics and universities came to accept a more rational division of academic activity then there could be more hope for the implementation of sensible levels of library provision throughout the country.

I am not convinced that the user reaction to what is undoubtedly a lively service offered by the Newcastle Polytechnic Library says much about self-renewal at present under one way or the other for Mr Harris' analysis is shallow in the extreme and has built into it a level of arrogance I would find distasteful were I to work in his neck of the woods.

Yours faithfully,
JOHN COWLEY,
Chief Librarian,
Polytechnic of North London.

Readers are reminded that letters for publication should be typed on one side of the paper only, double spaced and be not longer than 500 words.

DipHE courses

from Mr John Morris

Sir,—I am a student just finishing my first year on the DipHE course at the School of Independent Study at the North East London Polytechnic. I would like to draw your attention to the growth in the system has been and perhaps even stopped.

Many students in my year have experienced difficulties which have blocked the way to promotion. I trust that such a "stop-and-go" system of changing the course among the staff and students would be reduced to ease the coming promotion. But just how severe are the problems?

The "School of Independent Study" is now in the process of being an extremely large and complex system of study which is to be worth the disruption of the other staff and students. At present the "parallel" system of study is being introduced in all United Kingdom universities helping students with the Universities Statistics. The staff have many local records covering the years 1971-72 to 1974-75. Amongst other things, this record gives the staff and tells us when he or she has not practical work or what ages promotion "skills" stressed in the curriculum.

Most of my fellow students are in the same position. Information about individuals is during the exam period and we are provided with an account of the progress of the course as a whole. We are using a manpower planning model developed originally by the Civil Service. We use the university system is not a manpower planning model developed originally by the Civil Service. We use the university system is not a manpower planning model developed originally by the Civil Service.

These junior executive students are sure to be entering through the grades of lecturer, and intended to be the commoner lecturer and reader to course leading to a DipHE. We need to define the leaving Polytechnic with the two important promotion points rather carefully.

Along with many others, I am disappointed that the DipHE at the NEPL is not a "considerable" acquisition of skills and knowledge. (THE TIMES, July 9). My fellow students feel the "School of Independent Study" at NEPL is a long hard road to go, but it is perhaps not fulfilling its educational aims.

Yours faithfully,
JOHN MORRIS,
Wilmer House,
Driffield Road,
London E1.

Communication studies

from Professor Richard Wiles

Sir,—I should like to support the views expressed by Margaret Barker in your article (THE TIMES July 9).

The faculty of social sciences at this university is launching next year a new degree in human communication studies. It is a degree which will be fitted for a wide range of careers in which communication is involved.

The course will consist of interlinked elements in which psychology of human communication will be studied along with philosophy or linguistics or sign language. It will be a combination of academic and practical aspects, and it is our intention that our graduates will be competent in the practical aspects of human communication.

Our plans are ambitious and cannot be evaluated in the present place until 1980 or 1981. The course arises out of a realization in part that what education studies might mean in a framework in which professional practice is for teaching was not necessary in part. Contexts of teaching and learning within the wider context of "communication" thus came within our purview.

Yours faithfully,
RICHARD WHITFIELD,
Professor of Education,
University of Aston in Birmingham.

Stretch a point and clear the way

Vendy Hirsch and Roger Morgan propose two ways to loosen the blockage in the promotions system

any of the higher grades, and second that to professor from any of the lower grades.

What is the present position about promotion? Table 1 gives figures for all staff and separately for three subject areas, mechanical engineering, mathematics and French. Currently those who are being promoted to the lecturer grade have an average age of 39 and, if things remain as they are, we might expect that 63 per cent will receive this promotion before they retire.

We use these two measures, the first saying when promotion occurs and the second saying how likely promotion is, to describe promotion prospects. The corresponding figures for the promotion to professor are 43 and 30 per cent. The third column in the table gives the proportion of all staff who are already promoted—a 10.9 per cent of all staff for professors and 30.5 per cent for senior lecturers, readers or professors.

What will happen in the future? How will the figures in Table 1 change with time? First of all we might question whether the proportions being promoted before retirement are high enough. As things are, only 63 per cent can expect to ever be promoted out of the lecturer grade and only 30 per cent will obtain chairs.

If these proportions were increased without promoting staff any earlier in their careers, then there would have to be a roughly proportional increase in the number of senior posts. Perhaps this is unthinkable?

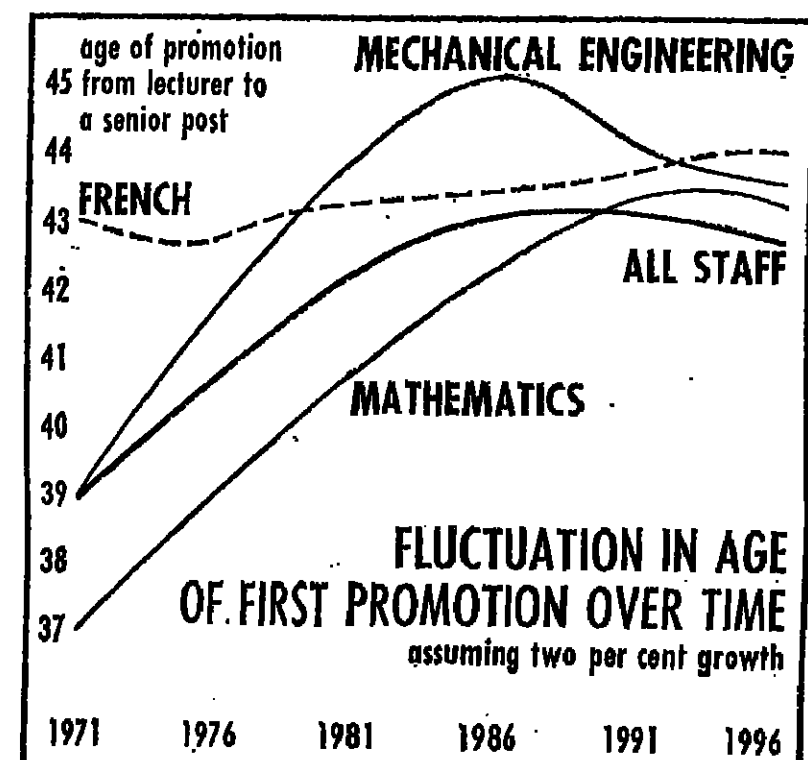
We will assume initially that the figure of 63 per cent remains roughly constant and that the figure of 30.5 per cent senior posts also remains constant. We consider what

TABLE 1: PROMOTION PROSPECTS IN 1971

	Average age at promotion	Proportion promoted before retirement (%)	Proportion already promoted (%)
ALL STAFF			
Promotion from lecturer	39	63	30.5
Promotion to professor	43	30	10.9
MECHANICAL ENGINEERING			
Promotion from lecturer	39	60	34.8
Promotion to professor	44	24	9.8
MATHEMATICS			
Promotion from lecturer	37	72	28.2
Promotion to professor	38	33	11.5
FRENCH			
Promotion from lecturer	43	85	27.9
Promotion to professor	46	39	10.3

TABLE 2: GRADE SIZES AND SALARY COSTS FOR CONSTANT PROMOTION AGES (Assuming 2% growth)

	Policy A: Constant relative grade sizes	Policy B: Constant average ages of promotion
	Under policy A	Under policy B
	Proportion of staff in senior grades (%)	Proportion of staff in senior grades (%)
1971	30.5	10.9
1981	36.8	13.4
Long Term	36.5	13.6
	% change in salary costs	% change in salary costs
1971	34.8	9.8
1981	43.1	12.3
Long Term	40.0	12.3
	% change in salary costs	% change in salary costs
1971	28.2	11.5
1981	42.3	17.8
Long Term	41.7	17.9
	% change in salary costs	% change in salary costs
1971	27.9	10.3
1981	26.7	10.1
Long Term	30.0	11.2



will happen to the average ages of promotion with these assumptions. Using a 2 per cent per annum growth rate we find that promotion prospects for all staff will indeed decline. Both ages of promotion will fall by about four years from the 1971 values by the mid-1980s. We show this for the first promotion from lecturer in the diagram.

The choice of any sensible figure for the growth rate of staff numbers is obviously very difficult at the present time, and the figure of two per cent is used more for the purpose of illustrating general trends than in an attempt to make accurate forecasts.

The results, however, seem to be fairly insensitive to changes in the growth rate, and at three per cent growth there would still be a three year increase in the promotion ages. If we assume that growth ceases altogether after 1976, the ages of promotion will rise to 47 and 51 by the mid-1990s (4 years above the maximum ages reached with 2 per cent growth) and then settle at 44 and 48 in the long term.

As these problems depend on the current age distribution of staff, which is in turn determined by the past history of growth, we might expect that there will be substantial variations in staff prospects according to the subject areas in which they work.

We have studied in detail the prospects for staff in mechanical engineering, mathematics and French, and the variations in age of promotion from lecturer in these subjects are also shown on the graph, for two per cent growth. Although we have used the same rate of growth for all three subjects for this illustration, it seems very unlikely that any future growth in staff numbers will be evenly spread over existing subject areas.

However, using the two per cent growth assumption, career prospects for staff in mechanical engineering will suffer a severe but temporary decline until the mid-1980s, followed by a partial recovery but never returning to 1971 values. Mathematics shows a continuing decline in prospects throughout the 1980s, with the long term ages of promotion being 5 years higher than they were in 1971. Promotion prospects for staff in French, by contrast, seem remarkably stable, although the ages of promotion in this subject were the highest to start with, so we are seeing in effect a levelling up of promotion ages.

Whether we consider these changes in promotion ages to represent a problem substantial enough to warrant some evasive action is obviously a subjective matter. Let us suppose for the moment, however, that we might consider making some policy changes to ease the situation.

The first thing we might try is some form of "early retirement" scheme. Such a policy, implemented in 1981, would only reduce the increases in the promotion ages for all staff by one year (from four years to three), even if every member of staff over 60 were forced to retire. We would need to introduce compulsory retirement at 65 to bring the long-term ages of promotion back to the 1971 values.

What about the controversial issue of tenure? We investigated

Why more students need not mean worse results

Cynics sometimes claim that the best way to improve an industry's productivity is to close down all but the most efficient. Similar appeals have been made even on behalf of the older (and therefore more efficient and illustrious?) universities.

On a more serious note, recent comparisons of average levels of academic achievement have tended to ignore the different bases upon which such averages are computed. Such oversights can lead to wrong conclusions, as we hope to show in this article.

Suppose that the flow of students through the higher education system can be interpreted in terms of school leavers passing through a selection process, as a result of which they go either into higher education or "other activities", both paths leading eventually to a final level of educational achievement.

The selection process will involve social, economic and institutional factors as well as personal and academic preferences. We assume that school leavers divide into two categories of post-school experience (HE and other) with 200 per cent in HE. The final level of educational attainment, which we call the final "score", is then carefully preserved in the inverted commas, is degraded class IQ or whatever measure might be preferred in the "more means worse" debate.

To link the selection process with the final "score", we assume that there is an initial "score" (such as A level) which serves as a guide of inherent ability. That is, the academic part of the selection process is more likely to choose good candidates than bad ones.

Given this assumption, it is apparent that an increased entry (greater p) is likely to produce a reduced average final "score", when averaged across those selected. Thus, more means worse.

However, the method of averaging is all-important. If we assume that further education produces a net positive effect upon the average final "score" (if not, whether the Higher Education system?) it is evident that the average final "score" will rise, whether averaged across the whole population of school leavers or just those who enter HE.

Further, since the selection process is unlikely to be (academically) perfect, the average final "score" of the top 1 per cent, 5 per cent or whatever of the whole population will also rise.

A simple example may convey the arguments of the preceding paragraph more succinctly. We consider the population of school leavers split into three groups: A with 10 per cent of leavers, average "score" 120 (after HE); B with 10 per cent of leavers, average "score" 110 (no HE); or C with 80 per cent of leavers, average "score" 95 (no HE).

If the higher education sector comprised only group A, the average score for higher education only would be 120, and for all leavers 100. On the other hand, if the higher education sector comprised groups A and B, the scores would be 125 and 101 respectively.

The particular numbers are less important than the general observation: that an increase in the size of the higher education sector will usually lower the average "score" for higher education only, while raising the average "score" for all leavers.

Compared with the more complex and controversial schemes, previously discussed, this policy of shifting grade sizes may prove a simpler, cheaper and more effective method of avoiding a decline in the career prospects of university teaching staff.

On the face of it the problems would then be none too serious, for we should remember that, if the proportion reaching a senior post before retirement is to be increased beyond the assumed figure of 63 per cent, this would lead to a need for further senior posts and so for further expense.

The authors are members of the control and management systems division of the engineering department at Cambridge University.

Keith Ord

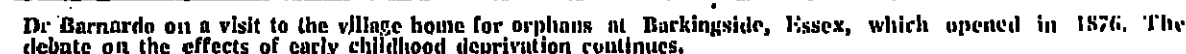
This article is based upon a paper which appeared in the *Mathematical Gazette* (1975, no 1, pages 34 to 37). The author is senior lecturer in statistics at the University of Warwick.

BOOKS

Lamb en pantoufles

An individual art

Section three presents studies of children's development in what is



The authors state that a child's early learning will have effects which, if unopposed, will fade with time. It will not, *per se*, have any long-term influence upon adult behaviour. This is an essential link in the developmental process. But who has argued that unopposed? But who has experience has profound effects? This proposition is quite untenable. In real life, a child's early experience will consist of a discrete, single event, but develops in an environment with a continuous emphasis on the importance of the first five years, but also that intervention can be more profitable.

Five stages of intervention are proposed: preparation for parenthood; the period before the child arrives; the first three years of life during which the primary objective is to establish an enduring emotional relationship between parent and child; the enduring one-to-one relationship so essential to the development of the young child; and the next two

Having worked hard at demolishing what they saw as the myth of early experience, the Clarkes' final conclusions are as unexpected as they are welcome. "Half-hearted attempts to 'prop up' families which may be essentially irredeemable are," by definition, useless. Society does, in fact, deal with suc-

change in the view
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offers little new regard
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fond-ombragée. The material
vided into four alphabetical
changed parts (adjectives, noun
and adverbs and other per
speech), each preceded by
grammatical introduction. There
terior index of English words
and.

The editor of a letter-writer like Lamb fuces some formidable problems: not of legibility—Lamb's hand is unusually clear—but of closing the letter in vigorous fashion. Nothing but the originals or facsimiles can really convey the flavour of some of Lamb's epistles—those with red ink, sketches and "asides" written in margins or really, using the pen, in the fore-edge of handwriting. Marryat gives a valiant best with his job, but within the conventions of modernity of type, converting underline-figures to traffic, using bold-face for the Lamb's second section, and various means Lamb's interlinear or marginal additions or glosses. Some punctuation has been changed, like closing quotations and parentheses as they are merely given, a dash

W. A. Craik

Man, the necessary enemy

Words in context

I hope that these sympathetic translations (which are in an American idiom) will lead to a wider appreciation of the admirable talent of Colette.

Anthony Kell

Words in contexts

Some curious combinations survive: "a vague probability," "repress hostilities," "a necessary psychiatrist." The selected contexts were then rendered into French over four years, mainly by professional translators and interpreters from Geneva.

It is difficult to summon up much enthusiasm for the result of these labours. Because of the way in which contexts were chosen and translated (only one rendering is normally suggested in each case

If the other volumes have not yet appeared, the publishers may be able to improve the quality of the proof-reading, but the basic idea has considerable weaknesses.

N. C. W. Spence

What Christopher Ricks calls their "reviewers' instant ingratitude" has ample source when anthologies of recent verse are before him. Here he can expend his space lamenting that "wrong" choice of poets or poems. But this temptation should be resisted, as Mr. Bold in his new *Cambridge Book of English Verse 1933-75* has done. He has tried to please everybody. His anthology does not aspire to be comprehensive; it is an exercise in taste, and many will share his taste for some of the poets and some of the poems. And perhaps most of the poets included. The chief objection to it is that it omits the best of the best of Auden. The period covered is 1933-75, yet Auden is excluded. This explanation seems to be that his work has been represented in a previous

But otherwise there is much to be said for the new *Cambridge Book*, whether one likes all the chosen poets or not. It is good to have their work represented by generous selections. The volume is beautifully produced and the text seems excellent.

I felt some misgivings about the choice from the older poets. I wished the selection from Empson could have altogether excluded the crossword-puzzling side, but it may not be possible to do this. I did not find the poems of Graves that are for me the most haunting, and the witty apophoristic side of his work does not appear. And I do not know whether the poems of Marianne Moore (taken only from his work in ordinary English) will win an English convert; his note of irascible bellowing occurs too often.

The other poets included a Dylan Thomas, Philip Larkin, Charles Tomlinson, Thom Gunn, Ted Hughes and Sylvia Plath, and

selection from their work seems very judicious. One absence from both the Cambridge books is Herbert Read. What has happened to his reputation? Helen Gardner did not deem him worthy of inclusion in the *New Oxford Book of English Verse*, and Laruelle's Oxford book gives him very little. Yet, as Mr. Jarrold shows in his study of the period, Read is a key figure in the reorientation of English poetry since the 1930s. Surely he is a candidate for reassessment?

Banerjee's excellent book is less speculative than the title suggests. One cannot but be struck by the preoccupation of so many English poets with the 1914-18 War. He writes with great penetration of Wilfred Owen and others who have come to be identified with that war. Like some other critics he has a somewhat exaggerated extent to which the horror voiced by the trench-poets (with the significant exception of Rosenberg, who already knew rats at firsthand) was due to their discovery of how the other half—the rank and file—lived. The war poetry is remembered, of course, because it tells us how we feel to fight in modern wars. It is not always noticed that it also tells us a good deal about the British social system.

Banerjee's scope includes the poets who wrote during, and about, the 1939-45 War, interesting and thoughtful as his discussion of them is he has not convinced me that there were any war poets then in the sense in which Owen was a war poet, and I still believe that the only "soldier poems" of that war that will be remembered are Henry Reed's ruefully comic "Lessons of the War". But Banerjee's book can be recommended in its later chapters also. He writes with firmness and clarity and shows some independence of judgment.

I do not know why the anthology
gists of contemporary verse feel
the need to describe the chosen
poets as human: is this to exclude
chimpanzees and computers? Much
in Finn's collection answers to the
textbook description: metric
regularity, frequent resort to a col-
loquial level of diction, conversa-
tional word-order, the manner jour-
nalistic-ironic, the implied morality
sceptical-permissive.

Perhaps that is all that is possible for poets these days. If so, one's respect for what Larkin can achieve in this spare field is enhanced. But naturally admirers of contemporary poetry would reject such a group-description and in an art so individual as poetry there are no limits to expectations, which friendly readers will discover for themselves here and there in the pages allotted to Patricia Beer, Arthur J. Bull, D. J. Enright, Seamus Heaney, Robert Morgan, Leslie Norris and Anthony Thwaite. One is still left wondering why anyone with anything to say nowadays should choose to say it in verse, but the answer is in this particular kind of verse.

W. W. Robson

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Applications close on 30 August, 1978.

Appellations should be sent to the Secretary, University of Bristol, Senate House, Bristol BS8 1TL, from whom further particulars may be obtained, not later than 6th September, 1976. (please quote reference EB).

Murdoch University Perth, Western Australia

Murdoch University, Western Australia's second university, admitted its first students in February, 1975. The University is committed to taking a fresh approach to higher education, with the goal of responding directly to the conditions and needs of the late twentieth century. This is reflected in its policies, organisational structure, programmes of study, philosophy of teaching and recruitment of staff.

The University is organised on a system of schools of study, with the Chairman of each school having both academic and administrative responsibility.

Applications are invited from suitably qualified persons for the following positions which are to be taken up in January, 1977, or as soon thereafter as possible.

SCHOOL OF EDUCATION

Chairman: Professor B. V. Hill

LECTURESHIPS IN EDUCATION

(Three positions)

Ref. EN0424, EN0425, EN0444

Applications are invited for lecturers in the following areas within the School of Education. Applicants should be qualified to higher degree level in their field. Duties will include undergraduate and postgraduate teaching and co-supervision of research students.

(1) Content Studies. Preference will be given to applicants with competencies in some of the following: politics and economics of education, educational policy and administration, sociology of education, history of education and philosophy of education.

(2) Research Studies—Educational Psychology. Preference will be given to applicants with strong backgrounds in psychology and education, particularly in developmental studies, learning or social psychology.

(3) Curriculum Studies. Preference will be given to applicants with backgrounds in curriculum development and with teaching strengths in such areas as mathematics education, basic reading and communication skills and the creative arts.

Further details and application forms will be available from the Registrar, Murdoch University, Perth, Western Australia 6001.

SCHOOL OF ENVIRONMENTAL AND LIFE SCIENCES

Chairman: Professor J. F. Lanigan

LECTURESHIP IN ENVIRONMENTAL SYSTEMS MANAGEMENT

Ref. EN0428

The appointee will assist in the development of courses and research in Environmental Science, with particular emphasis on environmental modelling, systems analysis and management. The appointee should have a basic training in the use of computers in environmental management, and the modelling of ecological systems. The appointee should have had experience in at least one of the following areas: Air Quality, Urban Planning and Management, Waste Management, Water Resources Management, Research experience equivalent to Ph.D. level is necessary.

Further details and application forms will be available from the Registrar, Murdoch University, Perth, Western Australia 6001.

SCHOOL OF HUMAN COMMUNICATION

Chairman: Professor J. D. Frodsham

LECTURESHIP IN WORLD LITERATURE AND LITERARY THEORY

Ref. EN0434

Applicants should be qualified in romance studies and should have a very good command of French, Spanish and Italian. The appointee should have a special interest in poetry and in the theory of poetic analysis. A doctorate in the field of literature would be an asset. Contributions could be made in a wide range of national literatures, generic historical developments or comparative studies.

LECTURESHIP IN WORLD LITERATURE AND LITERARY THEORY

Ref. EN0435

Applicants should be qualified in the theory and history of world drama, and should preferably have a broad knowledge of both European and non-European drama. They should have a very good command of at least two languages, and a working knowledge of at least one or more additional languages. An interest in dramatic production and in film would be an asset. Contributions could be made in a wide range of national literatures, generic historical developments or comparative studies.

LECTURESHIP IN SOUTHEAST ASIAN STUDIES

Ref. EN0436

Applicants for this position should have a strong background in the social sciences and be able to teach courses on the contemporary politics of Southeast Asia. They should be familiar with the theories of social and political change, and be able to place developments in Southeast Asia in relation to those in other parts of the world. In one or more of the social sciences of Southeast Asia (especially on the mainland).

SCHOOL OF MATHEMATICAL AND PHYSICAL SCIENCES

Chairman: Professor A. J. Parker

LECTURESHIP IN MATHEMATICS

Ref. EN0431

Lecturer in Mathematics with research interests in the area of mathematical physics, and with competence in operations research or similar branch of contemporary applied analysis. As well as contributing to the Mathematics programme, the successful applicant will be expected to take part in the teaching of the subject.

Further details and application forms will be available from the Registrar, Murdoch University, Perth, Western Australia 6001.

TEMPORARY LECTURESHIP IN CHEMISTRY

Ref. EN0429

This is a three-year appointment. A research analyst in inorganic chemistry, hydrocarbonology, studies in chemistry of energy conversion, consumer products, and as well as contributing experience in these areas to the University. The successful applicant will be expected to take part in School and University courses such as Science, Technology and Society; Energy and Life Systems; Computer Science; Energy and Resources. The resources of the well-established Mineral Chemistry Research Unit will be available to assist the research interests of the successful applicant.

NOTE: This temporary position has different conditions of appointment which are payment of rates to removal and settling-in allowances.

SCHOOL OF SOCIAL INQUIRY

Chairman: Professor J. R. Ansar

LECTURESHIP IN HISTORY

History of Science and Technology

Ref. EN0436

The successful applicant should be qualified in the area of the History of Science and Technology in the 19th and 20th centuries. Duties will include teaching a course in the History of Science and Technology, and participating in other courses of an inter-disciplinary nature.

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Regional and Urban Economics

Ref. EN0443

An economist is required to structure and teach a new first course in regional and urban economics, and to develop an overall sequence of several chapters in the course. The successful applicant will also be required to teach economic principles.

LECTURESHIP IN PSYCHOLOGY

Ref. EN0438

Applicants should be qualified psychologists with special interests and experience in the following areas: social psychology—general experimental psychology, social psychology of children, child psychology, social psychology of education, and social psychology of more advanced specialised courses.

LECTURESHIP IN PEACE AND CONFLICT STUDIES

Social Anthropology

Ref. EN0440

A social anthropologist with an interest in class and race relations, methodology, and contemporary issues in the field of Peace and Conflict Studies. The successful applicant will also be required to teach economic principles.

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EXETER

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